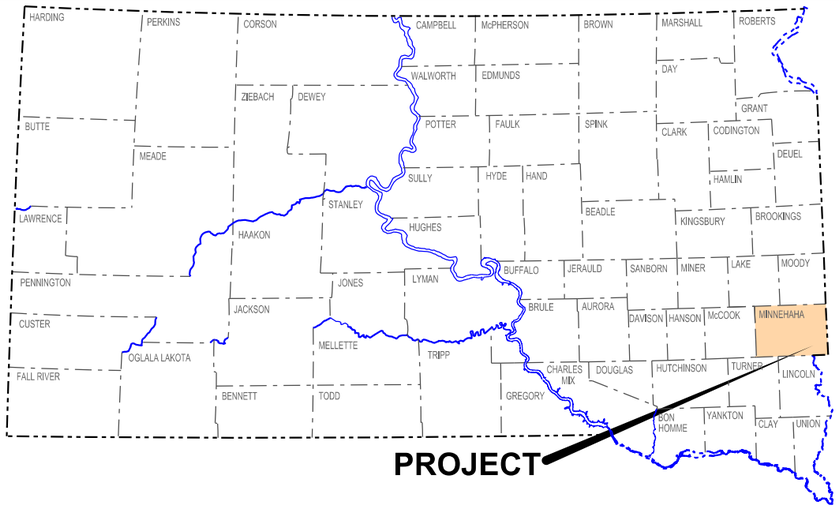


STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT 229N–271
INTERSTATE 229
MINNEHAHA COUNTY

CLEARING, UNCLASSIFIED EXCAVATION,
CONTRACTOR FURNISHED BORROW,
CONTRACTOR FURNISHED TOPSOIL,
FENCING, EROSION CONTROL &
RIPRAP

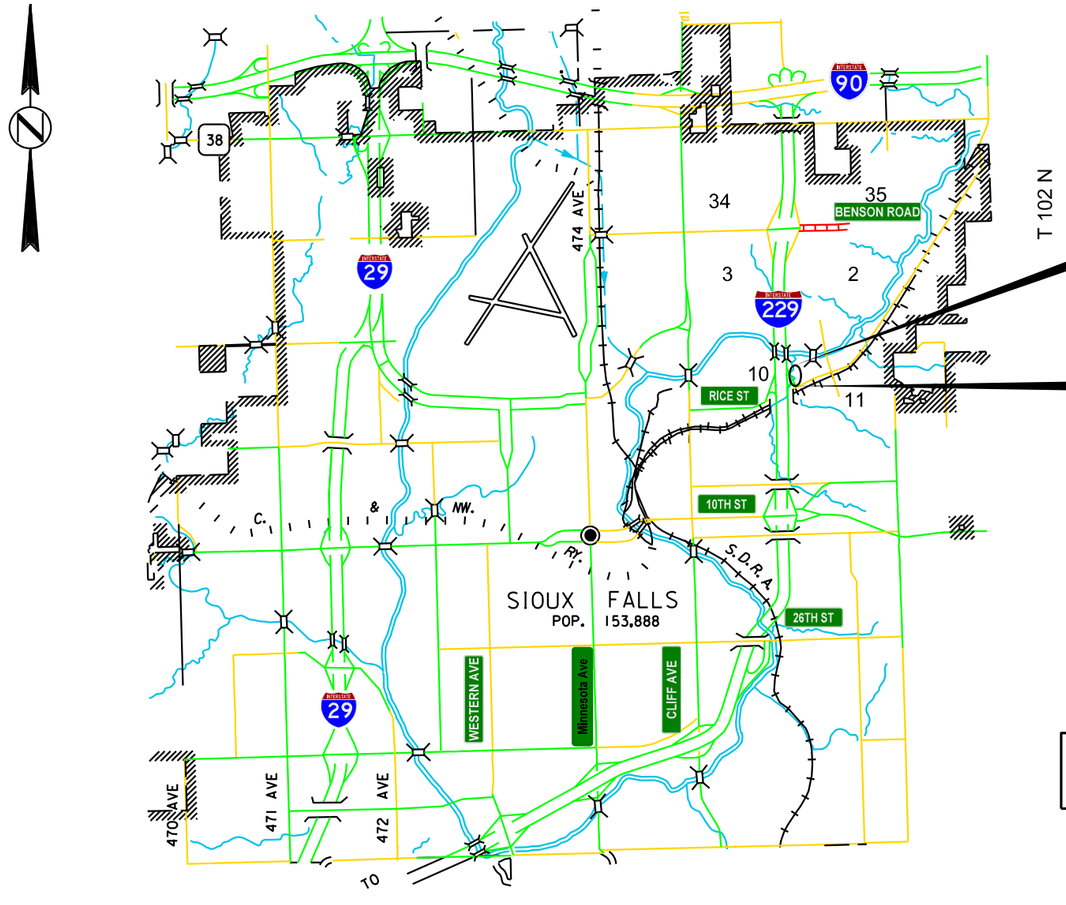
PCN I4M9

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	1	25

Plotting Date: 05/04/2017

INDEX OF SHEETS

R 49 W



END PROJECT
MRM 7.91 +0.073
MILEAGE 8.530

BEGIN PROJECT
MRM 7.91 +0.000
MILEAGE 8.457

DESIGN DESIGNATION	
ADT(2016)	13,775
ADT(2036)	21,241
DHV	2337
D	56%
T DHV	5.1%
T ADT	11.3%
V	65 MPH

STORM WATER PERMIT
(None required)

PROJECT LENGTH
Length: 387'

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	2	25

Non-Section Method

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0600	Remove Fence	373	Ft
120E0010	Unclassified Excavation	1,725	CuYd
120E0600	Contractor Furnished Borrow Excavation	1,980	CuYd
230E0020	Contractor Furnished Topsoil	215	CuYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
620E0030	Type 3 Right-of-Way Fence	340	Ft
620E1020	2 Post Panel	2	Each
632E2520	Type 2 Object Marker	2	Each
634E0110	Traffic Control Signs	81.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
700E0210	Class B Riprap	1,268.0	Ton
730E0251	Special Permanent Seed Mixture 1	42	Lb
734E0103	Type 3 Erosion Control Blanket	2,097	SqYd
734E0133	Type 3 Turf Reinforcement Mat	465.0	SqYd
831E0110	Type B Drainage Fabric	1,604	SqYd

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

COMMITMENT B5: NORTHERN LONG-EARED BAT

This project is within the range of suitable habitat for the Northern Long-eared Bat (NLEB) and project work will avoid conflicts with NLEB roosting habitat.

Action Taken/Required:

Project activities that include tree removal and/or structure removal and/or structure maintenance work should not occur within the location(s) listed below during the NLEB seasonal work restriction timeframe without approval from the SDDOT Environmental Office.

Station	NLEB Seasonal Work Restriction
1+82 to 5+69	June 15th to July 31st

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D2: SURFACE WATER DISCHARGE

The SDDENR General Permit for Temporary Discharge is required for temporary dewatering and discharges to waters of the state. The effluent limit for TSS will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as cold water permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as cold water permanent fish life propagation waters, the effluent limit for TSS shall be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of TSS sampling, the plan must be developed and implemented prior to discontinuing TSS sampling. Refer to section 3.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in section 2.2 of the permit.

Action Taken/Required:

If construction dewatering is required, the Contractor shall obtain the General Permit for Temporary Discharge Activities from the SDDENR Surface Water Program, 605-773-3351.
http://denr.sd.gov/des/sw/swqformsandpermits.aspx

The Contractor shall provide a copy of the approved permit to the Project Engineer. The approved permit shall be kept onsite and as part of the project records.

Effluent monitoring, as a result of dewatering activities, shall be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to SDDENR monthly. Additional information can be found at http://denr.sd.gov/des/sw/WhatisaDMR.aspx.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the Public ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating “No Dumping Allowed”.

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the US Army Corps of Engineers for the permanent actions associated with this project.

Action Taken/Required:

The Contractor shall comply with all requirements contained in the Section 404 permit.

The Contractor shall also be responsible for obtaining a Section 404 permit for any dredge, excavation, or fill activities associated with staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands or waters of the United States.

UTILITIES

The Contractor shall contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It shall be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor shall contact the Project Engineer to determine modifications that will be necessary to avoid utility impacts.

CLEARING

Clearing shall be accomplished within the work limits from Station 1+50 to 5+69.

The trees that require sawing will need to be cut, so no part projects above finished ground by 24". The trees that require sawing are adjacent to the existing box culvert and cannot be safely removed without damaging the existing wingwalls.

Diameter	Remove Entire Tree	Sawing Required	Total Trees
Under 12"	39	0	39
12" to 18"	14	2	16
18" to 24"	5	2	7
24" to 30"	4	1	5
60"		1	1
	Total Trees to be removed		68

The table above is for information only, and clearing shall be accomplished per section 100 of the Standard Specifications.

UNCLASSIFIED EXCAVATION

1,980 CuYd's of Unclassified Excavation have been included for reshaping of the existing drainage channel and removing unsuitable materials for backfill from the channel and channel slopes. Plan's quantity shall be used for final payment for Unclassified Excavation unless changes are ordered by the Engineer.

The existing drainage channel slopes are lined with riprap, large concrete pieces, and other miscellaneous items. The riprap, large concrete pieces, and other miscellaneous items shall be removed prior to shaping of the new drainage channel. Removal of these items shall be incidental to the contract item Unclassified Excavation.

The existing quartzite riprap may be salvaged, weighed, and reused on the project as Class B Riprap provided it meets the requirements of section 830 of the Standard Specifications.

Muck excavation will not be considered on this project; all excavation shall be included in the contract item Unclassified Excavation. Material not suitable for backfill as determined by the Engineer shall be wasted by the Contractor

Compaction of all materials on the project associated with Unclassified Excavation shall be to the satisfaction of the Engineer.

CONTRACTOR FURNISHED BORROW EXCAVATION

The Contractor shall provide a suitable site for Contractor furnished borrow excavation material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site. The borrow material shall be approved by the Engineer.

The quantity of Contractor Furnished Borrow Excavation was calculated using the actual amount of fill for the project without an additional shrinkage value. A portion of the unclassified excavation is expected to be suitable fill; which for this project will be considered a balance for not adding additional shrinkage to the estimated quantity. The plans quantity for "Contractor Furnished Borrow Excavation" as shown in the Estimate of Quantities will be the basis of payment for this item.

Restoration of the Contractor furnished borrow excavation site shall be the responsibility of the Contractor.

Compaction of Contractor furnished borrow material shall be to the satisfaction of the Engineer.

TABLE OF RIPRAP AND DRAINAGE FABRIC

Station	L/R	Class B Riprap (Ton)	Type B Drainage Fabric (SqYd)
1+82 to 4+00	L & R	1268.0	1604.0
	Totals:	1268.0	1,604.0

REMOVE FENCE

The Contractor shall remove the existing right-of-way fence that is to be replaced as designated in the plans and/or as ordered by the Engineer.

BRACE PANELS FOR ROW FENCE

The E-Z Brace or an approved equal may be utilized as an alternate horizontal brace in the brace panels if approved by the Engineer. The E-Z Brace shall be attached to each wood post utilizing two 5/16" x 3" lag screws. Holes of appropriate diameter, based on wood post condition, shall be drilled before placement of lag screws. The following are contacts regarding the E-Z Brace:

Roger Papka
E-Z Brace
1160 Karen St.
Watertown, SD 57201
605-881-6142

Dennis Mack
E-Z Brace
108 18th St. NE
Watertown, SD 57201
605-881-4990

NEW POST PANELS

Existing post panels shall be replaced. The number of 2 Post Panels will be the actual number installed and will be paid for at the contract unit price per each.

FENCE TABLE

LANE	INTERSTATE 229	REMOVE FENCE FT	TYPE 3 R/W FENCE FT	2 POST PANEL EACH	NOTES
NB	Rice Street On Ramp	373	340	2	Remove 33' South of Box and 340' North of Box, Reinstall Just from Box to North
	I229 TOTALS:	**373**	**340**	**2**	

REMOVE AND REPLACE TOPSOIL

Topsoil shall also be salvaged and stockpiled prior to construction. Limits of this work, depth of salvage, and stockpile location will be directed by the Engineer. Following completion of construction, topsoil shall be spread evenly over the disturbed areas.

All costs associated with removing and replacing the topsoil shall be incidental to the contract lump sum price for "Remove and Replace Topsoil".

CONTRACTOR FURNISHED TOPSOIL

Contractor Furnished Topsoil shall be spread evenly over areas as directed by the Engineer.

All costs associated with placing and shaping the topsoil shall be incidental to the contract unit price for the item Contractor Furnished Topsoil.

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum shall consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier shall provide certification of the fungal species claimed and the live propagule count. The inoculum shall include the following fungal species:

Glomus intraradices 25%
Glomus aggregatu 25%
Glomus mosseae 25%
Glomus etunicatum 25%

All seed shall be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed shall be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits.

Plans quantity will be basis of payment for permanent seeding.

Special Permanent Seed Mixture 1 shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana	14
Switchgrass	Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer	6
Indiangrass	Holt, Tomahawk	6
Big Bluestem	Bison, Bonilla, Champ, Pawnee, Sunnyview	6
Oats or Spring Wheat: April through May; Winter Wheat: August through November		10
	Total:	42

EROSION CONTROL BLANKET

Erosion control blanket shall be installed as per the Erosion Control Layout Detail and at locations determined by the Engineer during construction.

The erosion control blanket provided shall be from the approved product list. The approved product list for erosion control blanket may be viewed at the following internet site:

http://sddot.com/business/certification/products/Default.aspx

TABLE OF EROSION CONTROL BLANKET

Station	to	Station	L/R	Location	Type	Quantity (SqYd)
1+81		4+00	R	Channel slope	3	309
1+81		5+71	L	Channel slope	3	1788
				Total Type 3 Erosion Control Blanket:		2097

TURF REINFORCEMENT MAT

Turf Reinforcement Mat shall be installed at locations shown in the table at the widths specified, and at locations determined by the Engineer during construction. The Mat shall be installed parallel to the channel as directed by the engineer. The Contractor shall use a turf reinforcement mat from the approved products list. The approved product list for turf reinforcement mat may be viewed at the following internet site:

http://sddot.com/business/certification/products/Default.aspx

TABLE OF TURF REINFORCEMENT MAT

Station	to	Station	Location	L/R	Width (Ft)	Type	Quantity (SqYd)
4+00		5+71	Channel slope	L	6	3	113
4+00		5+71	Channel slope	R	Variable	3	352
				Total Type 3 Turf Reinforcement Mat:			465

GENERAL MAINTENANCE OF TRAFFIC

The bottom of signs on portable or temporary supports shall not be less than seven feet above the pavement in urban areas and one foot above the pavement in rural areas. Portable sign supports may be used as long as the duration is less than 3 days. If the duration is more than 3 days the signs shall be on fixed location, ground mounted, breakaway supports.

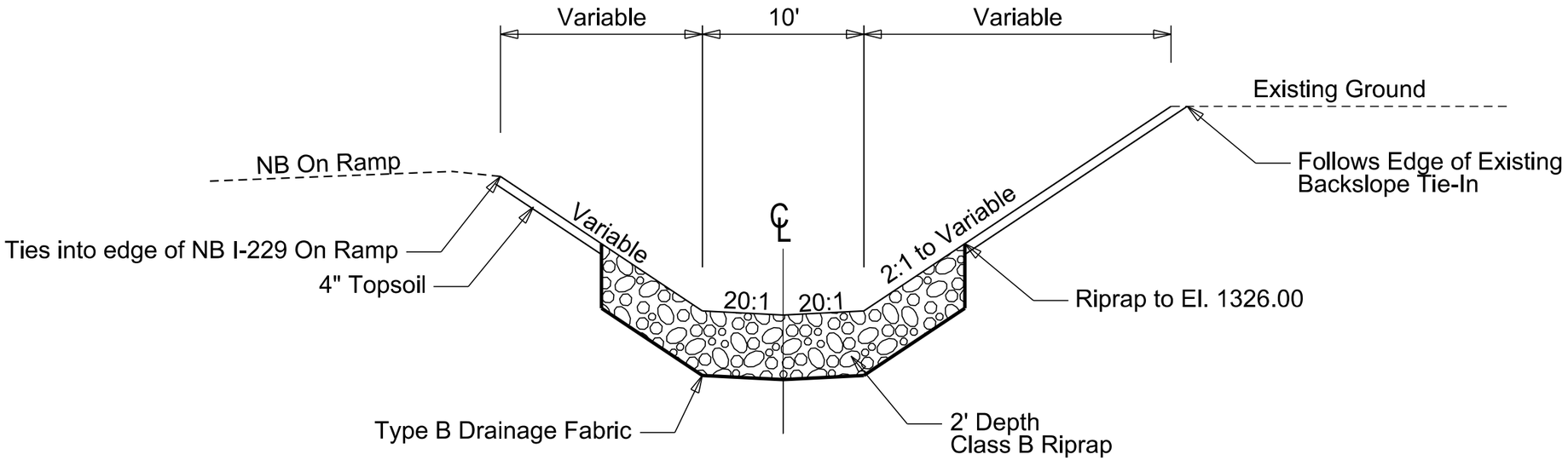
The Contractor shall remove and reset any 4”x4” delineators that interfere with grading activities. Cost for removal and resetting of delineators shall be incidental to the contract item Traffic Control Miscellaneous.

ITEMIZED LIST FOR TRAFFIC CONTROL

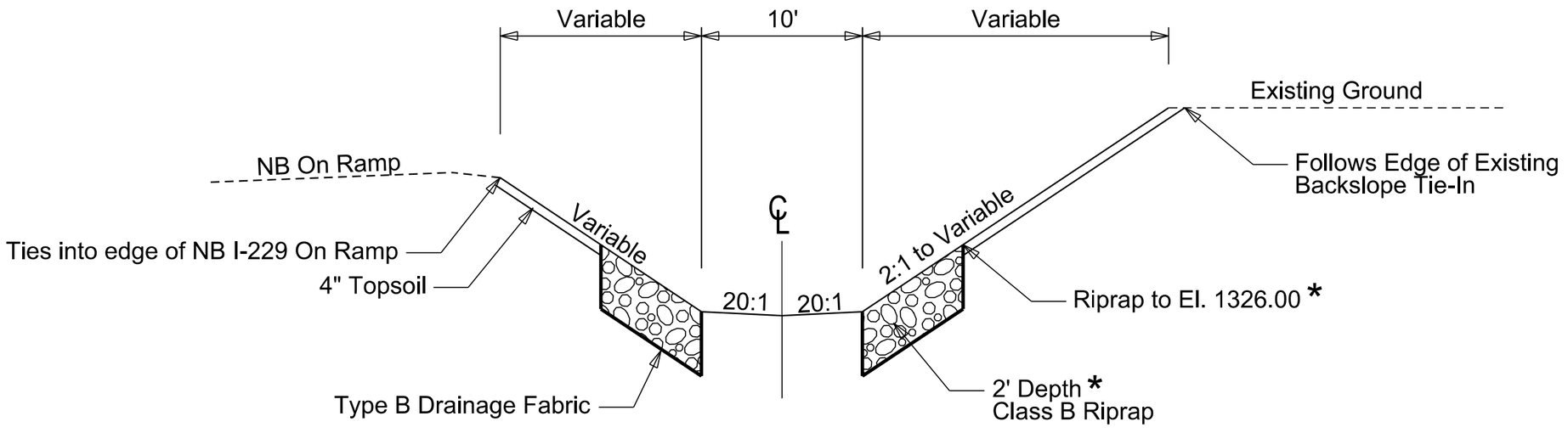
		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W5-4	RAMP NARROWS	1	48" x 48"	16.0	16.0
W13-4P	ON RAMP (plaque)	1	36" x 36"	9.0	9.0
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W21-5a	LEFT or RIGHT SHOULDER CLOSED	1	48" x 48"	16.0	16.0
G20-2	END ROAD WORK	1	48" x 24"	8.0	8.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			81.0

TYPICAL SECTION

1+82 to 2+25



2+25 to 5+69



*Riprap to Stop at Station 4+00

PROJECT LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	7	25

Plotting Date: 05/11/2017

HORIZONTAL ALIGNMENT

Type	Station			Northing	Easting
POB	0+00.00			470018.917	2933290.815
		TL= 182.72	N 49°36'57" E		
PC	1+82.72			470137.303	2933429.996
PI	2+45.38	R = 75.00	Delta = 79°45'21" L	470177.901	2933477.725
PT	2+87.12			470232.090	2933446.263
		TL= 290.80	N 30°08'24" W		
POE	5+77.92			470483.575	2933300.247

ROW

EASEMENT

ROW

INTERSTATE 229

RICE STREET

PLOT SCALE - 1:80

PLOTTED FROM - TRSF12114

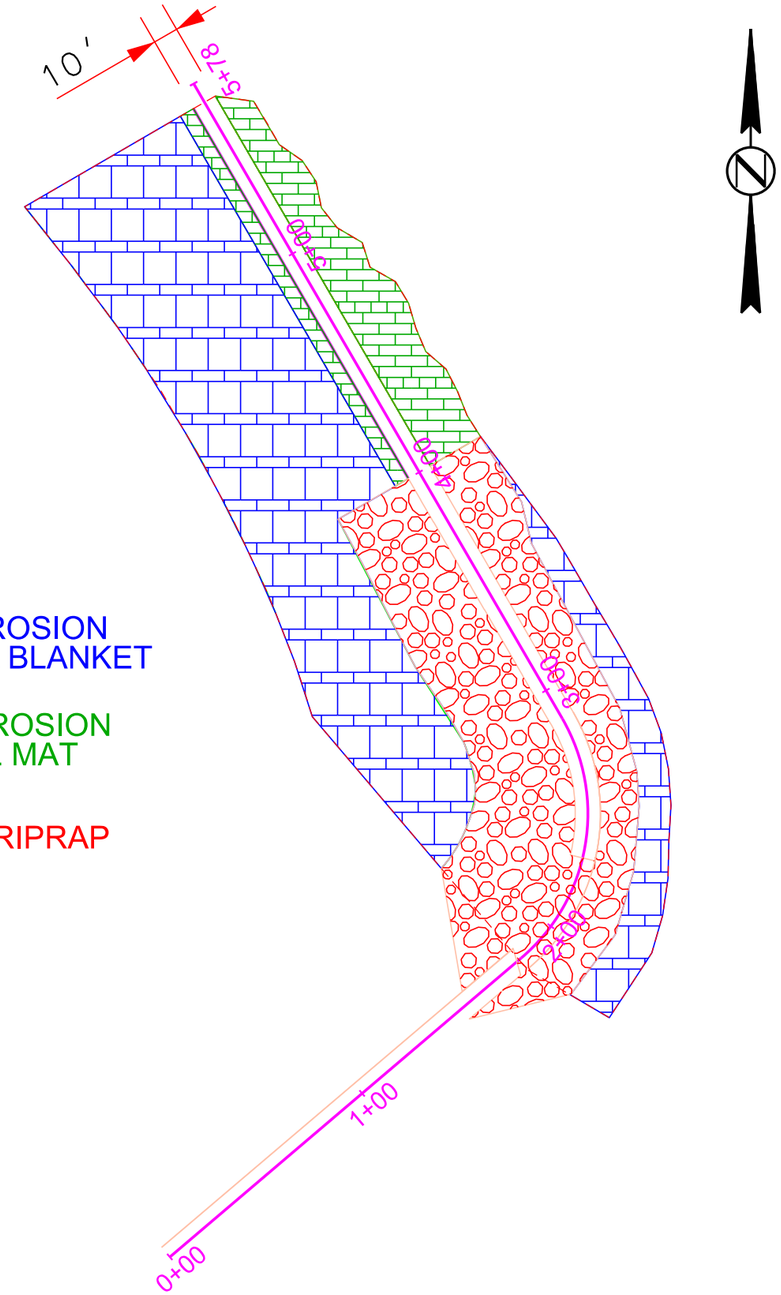
PLOT NAME - 1

FILE - ...\MINN14M9\PROJECT LAYOUT.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	8	25

Plotting Date: 05/04/2017

EROSION CONTROL LAYOUT



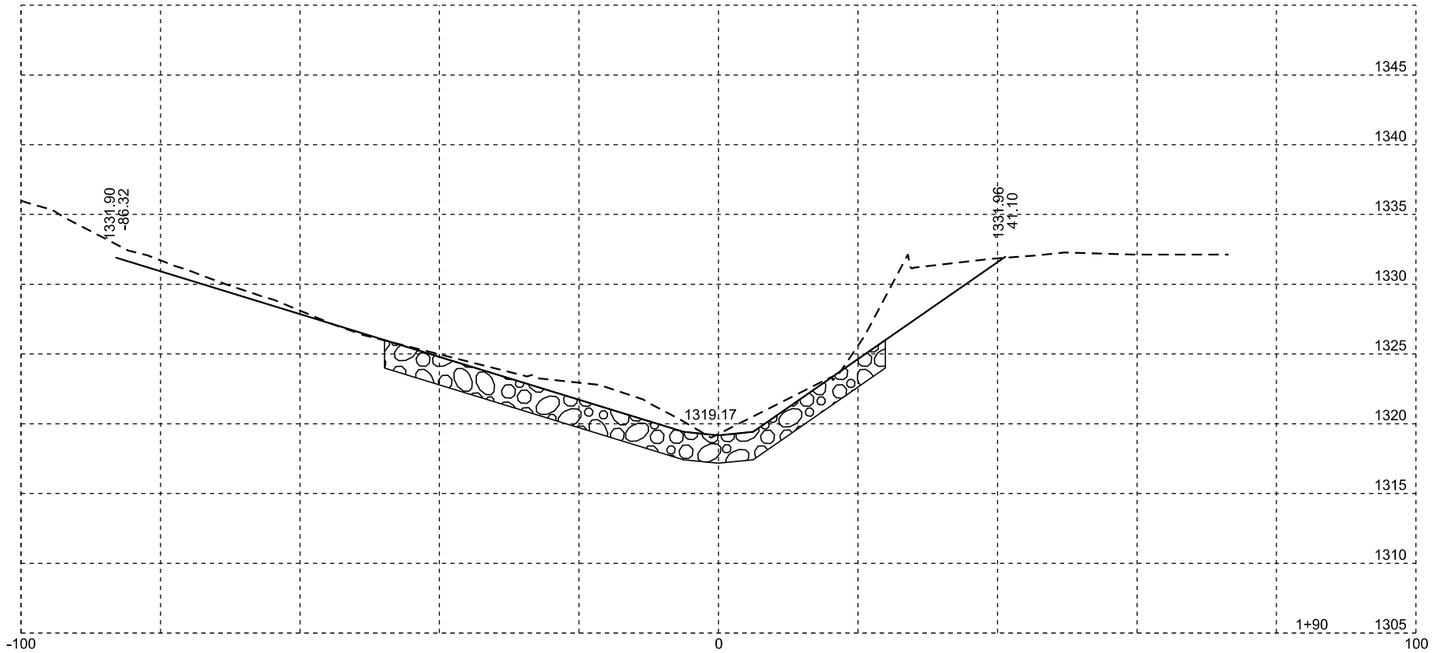
TYPE 3 EROSION CONTROL BLANKET

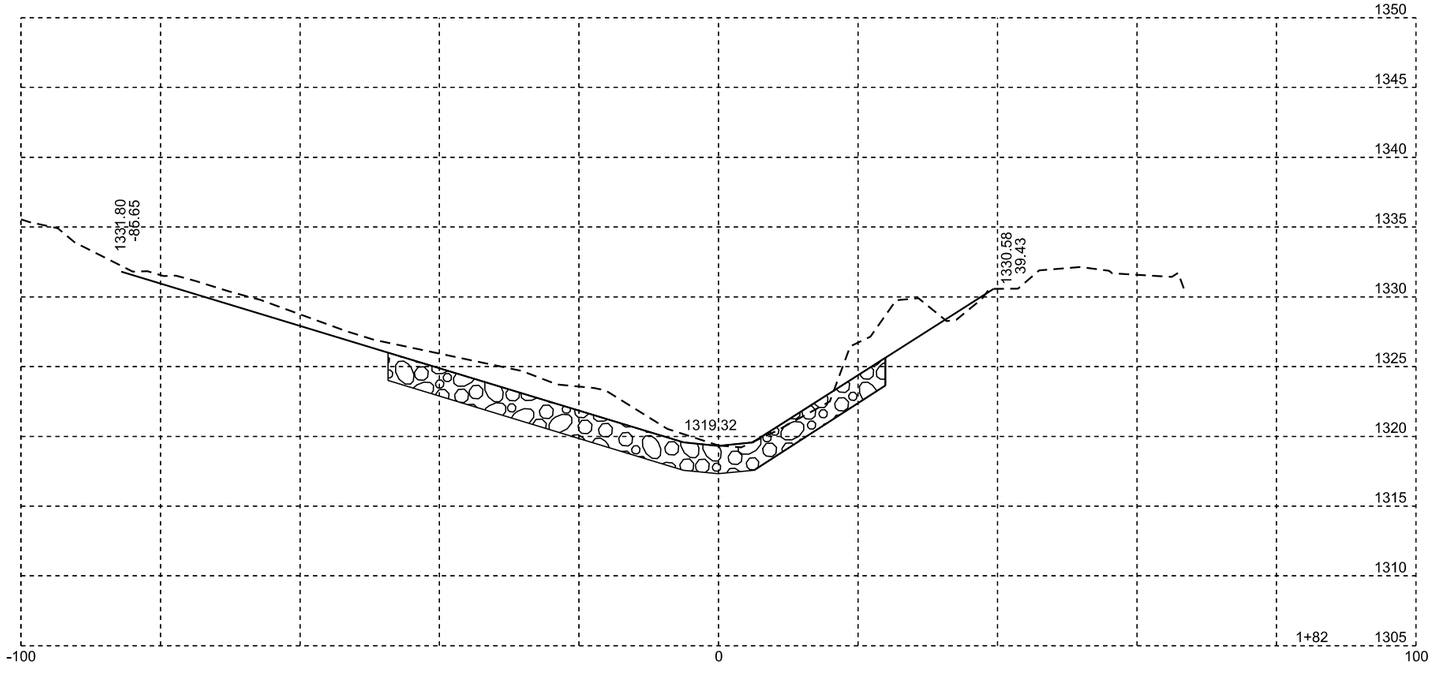
TYPE 3 EROSION CONTROL MAT

CLASS B RIPRAP

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	9	25

Plotting Date: 05/04/2017





PLOT SCALE - 1:21.7176

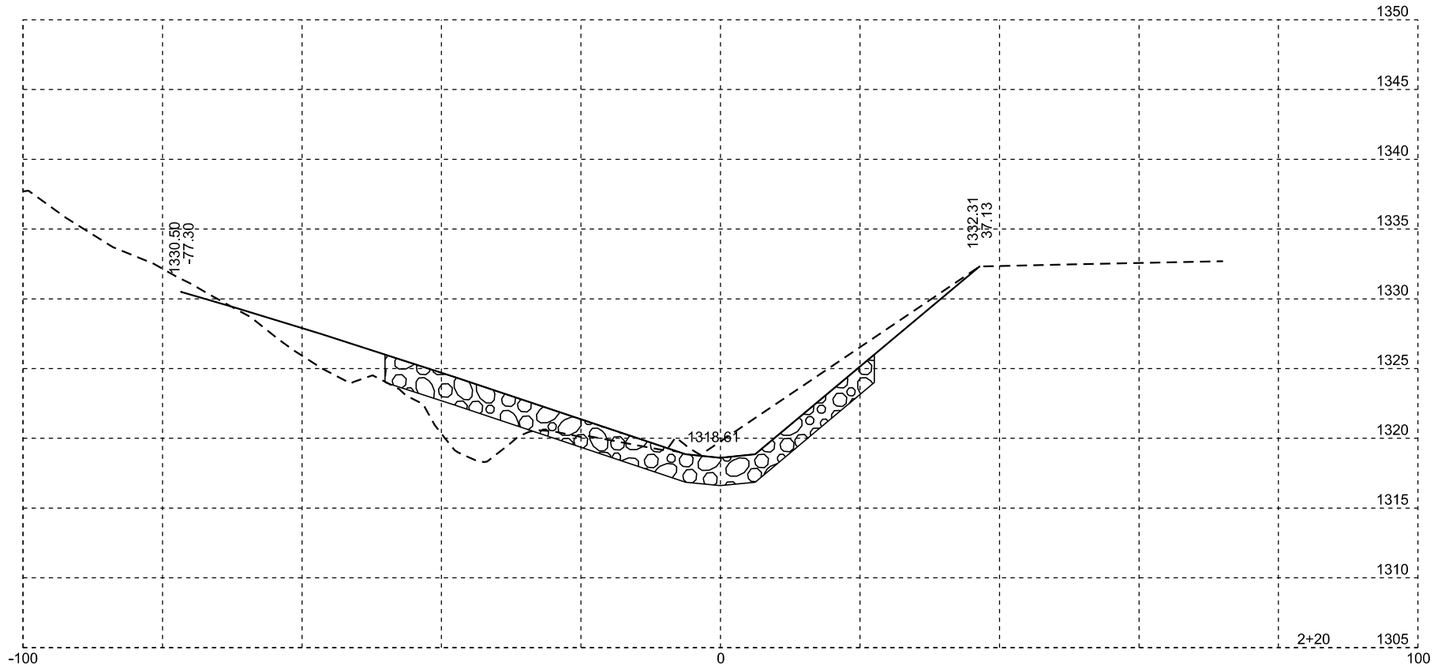
PLOTTED FROM - TRSF12114

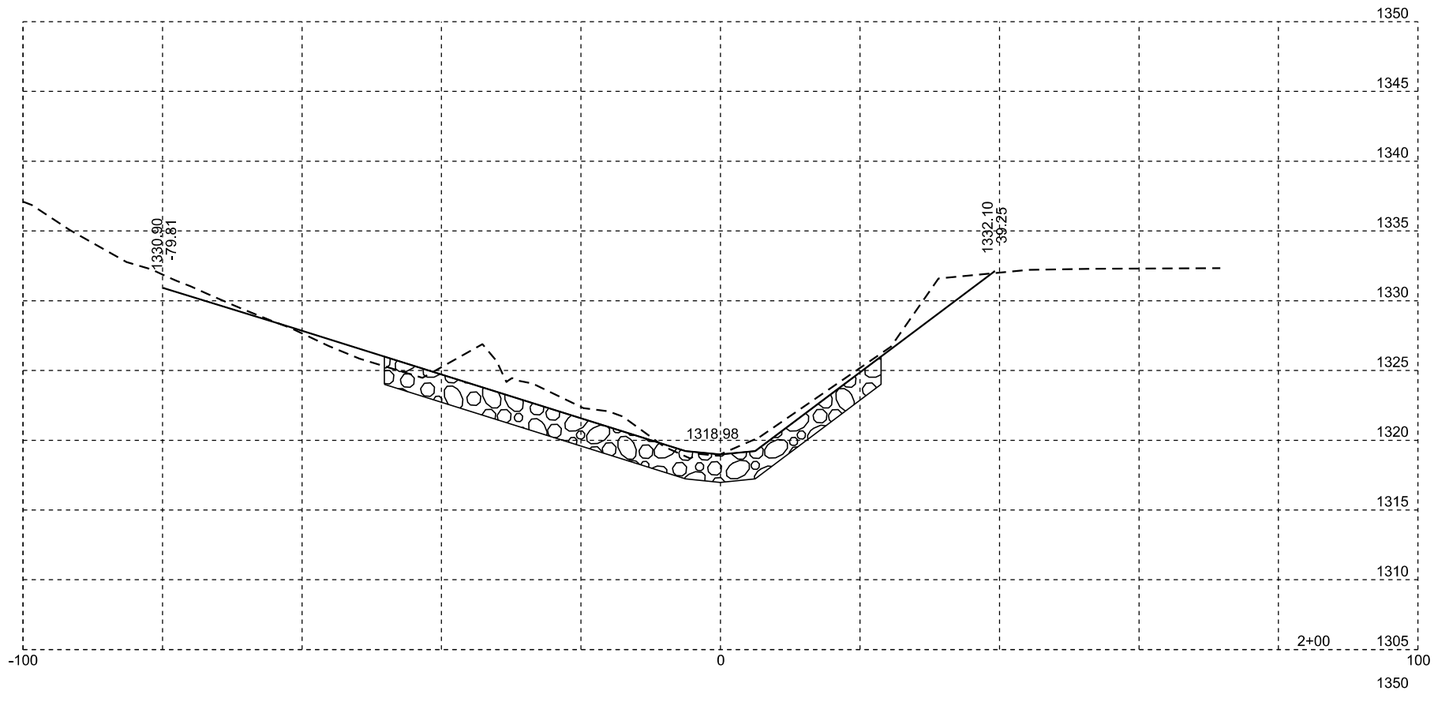
PLOT NAME - 1

FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	10	25

Plotting Date: 04/03/2017





PLOT SCALE - 1:21.7176

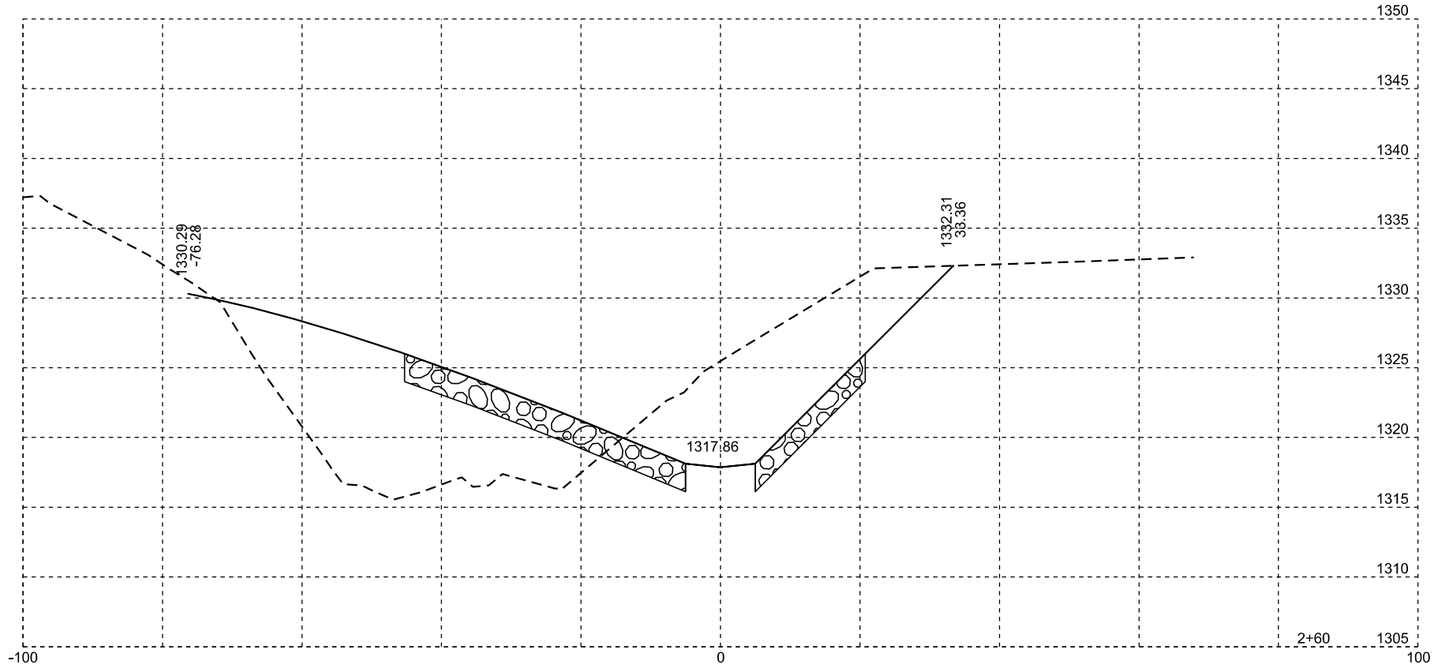
PLOTTED FROM - TRSF12114

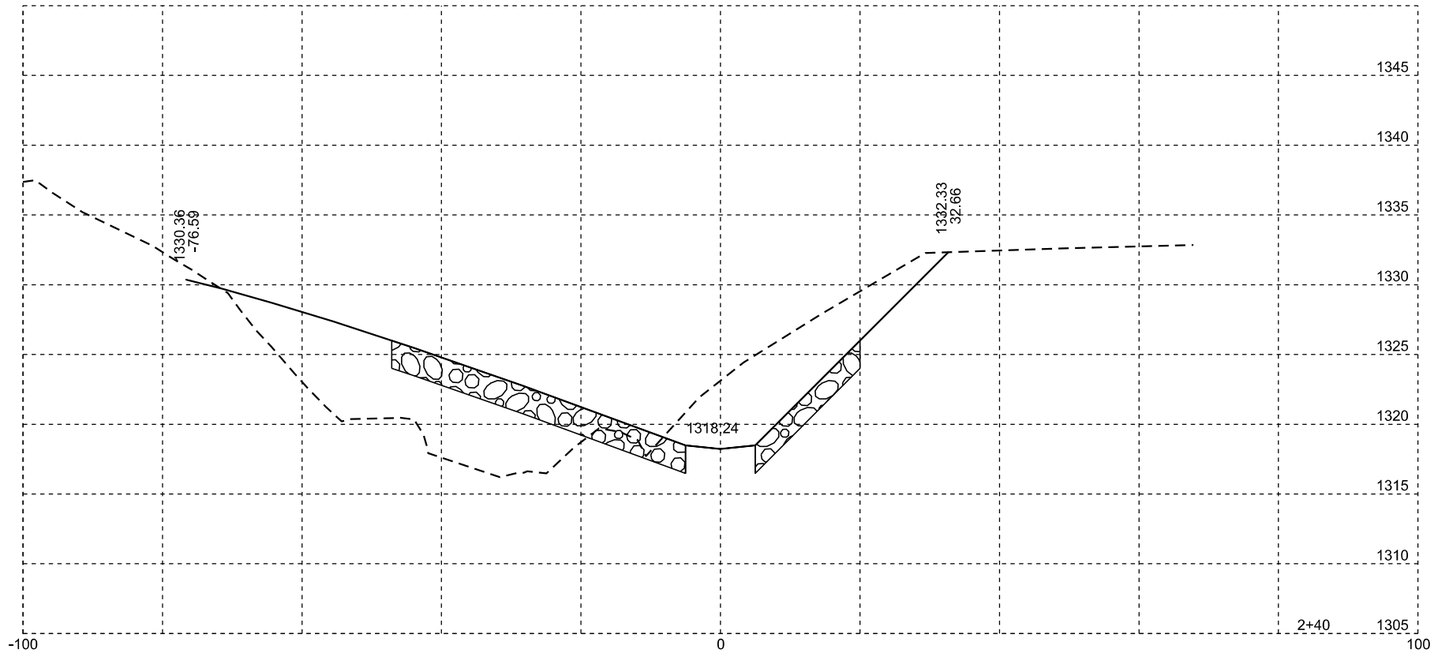
PLOT NAME - 2

FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	11	25

Plotting Date: 04/03/2017





PLOT SCALE - 1+21.7176

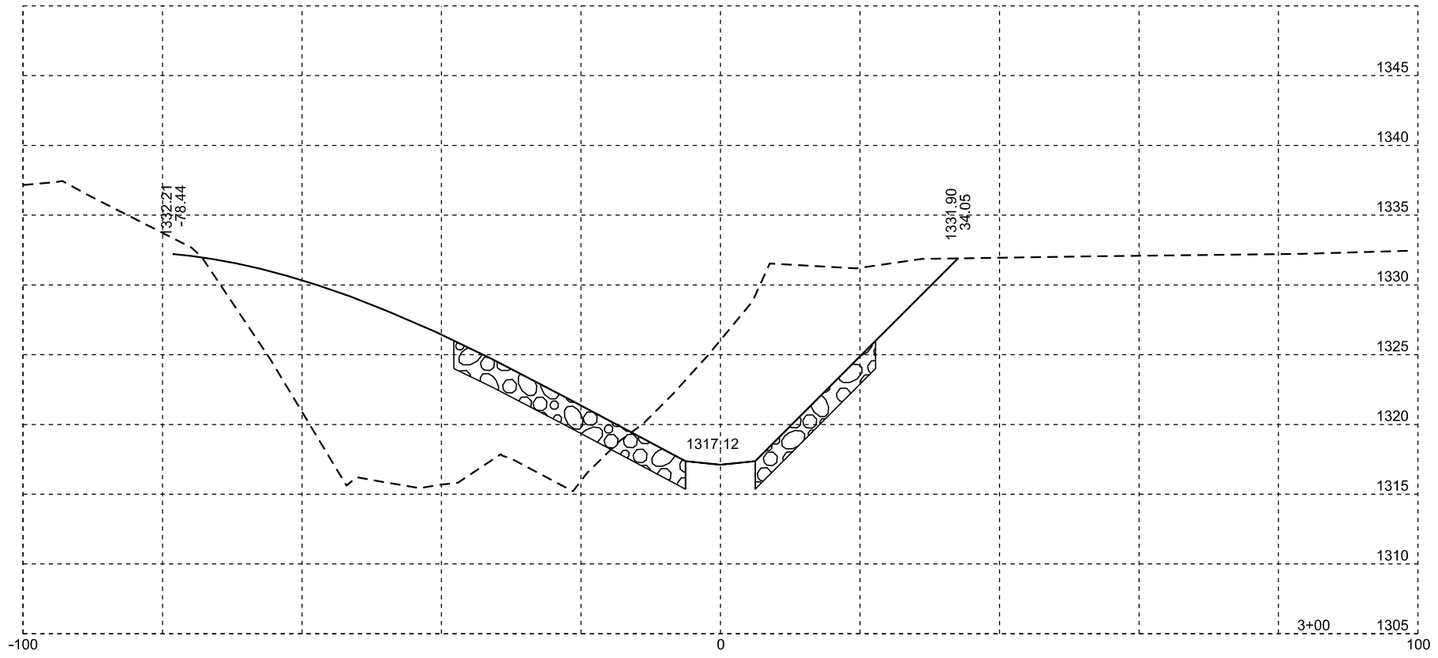
PLOT NAME - 3

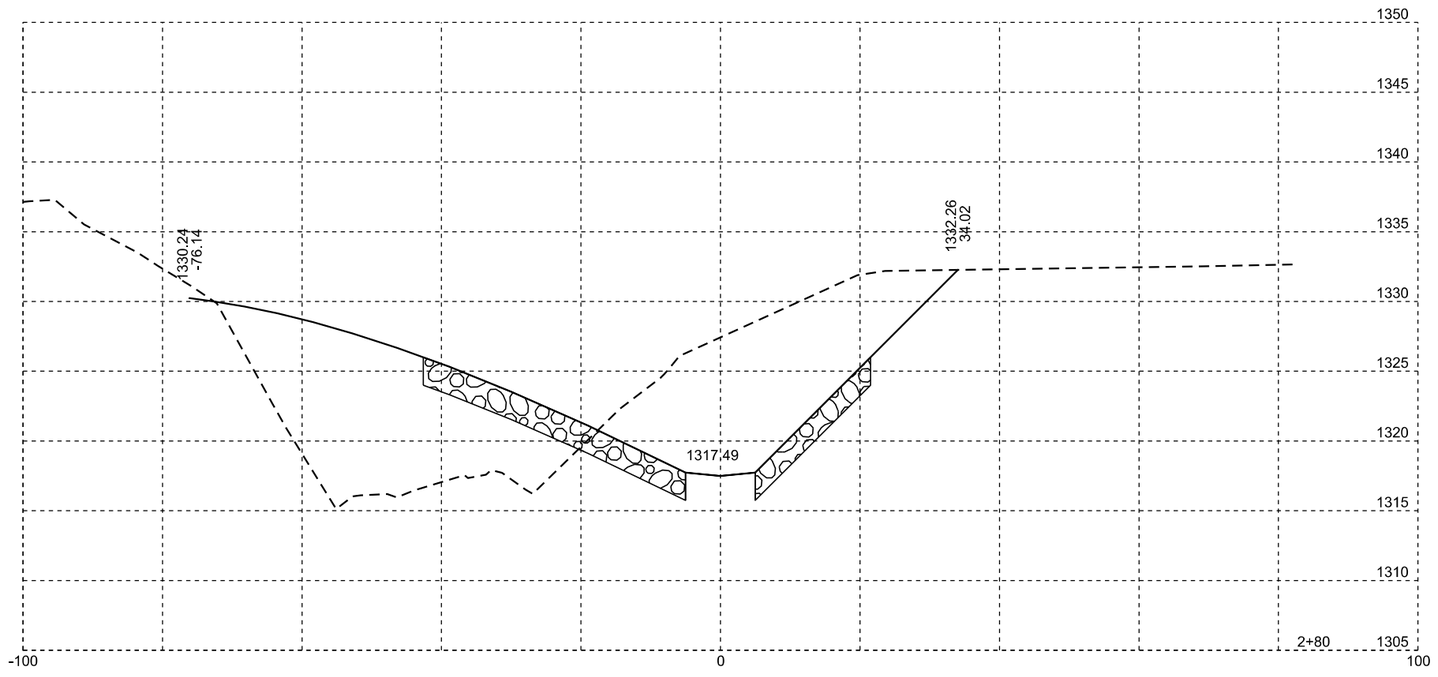
FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN

PLOTTED FROM - TRSF12114

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	12	25

Plotting Date: 04/03/2017





PLOT SCALE - 1:21.7176

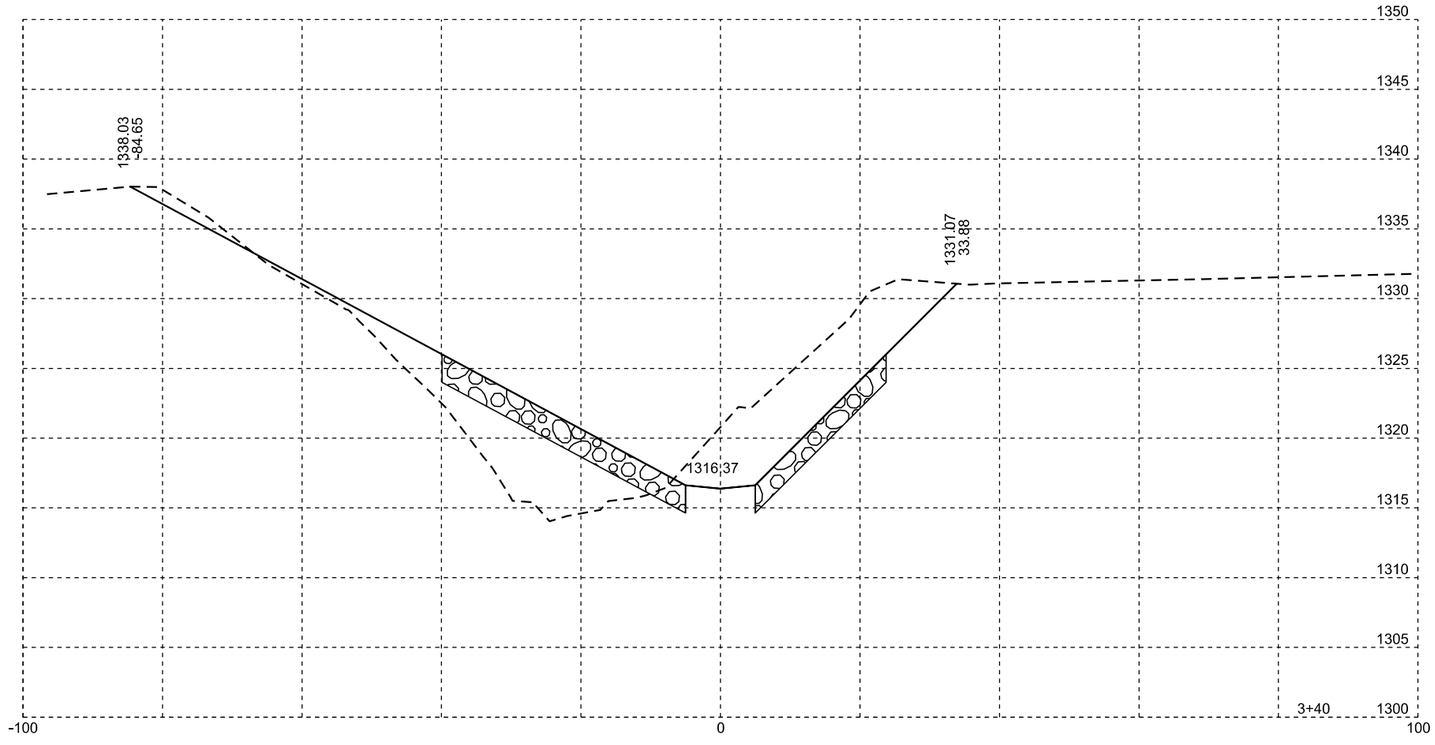
PLOT NAME - 4

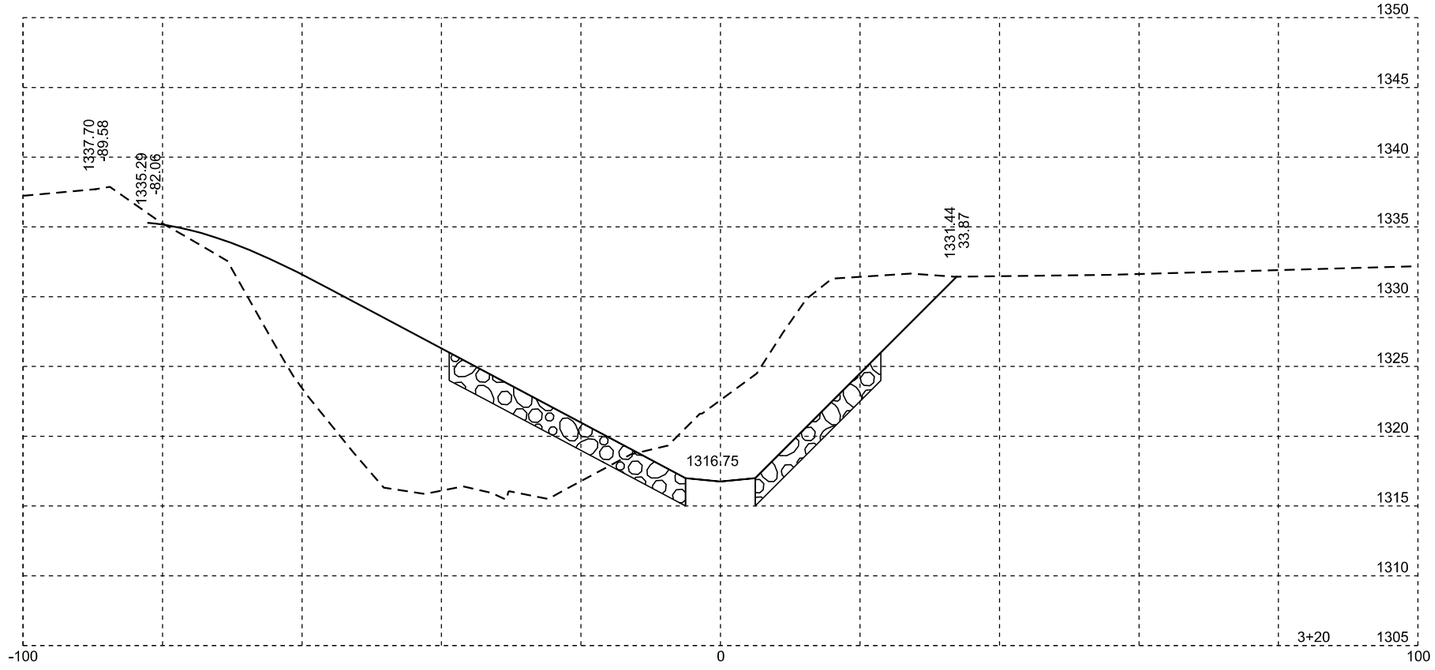
FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN

PLOTTED FROM - TRSF12114

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	13	25

Plotting Date: 04/03/2017





PLOT SCALE - 1:21.7176

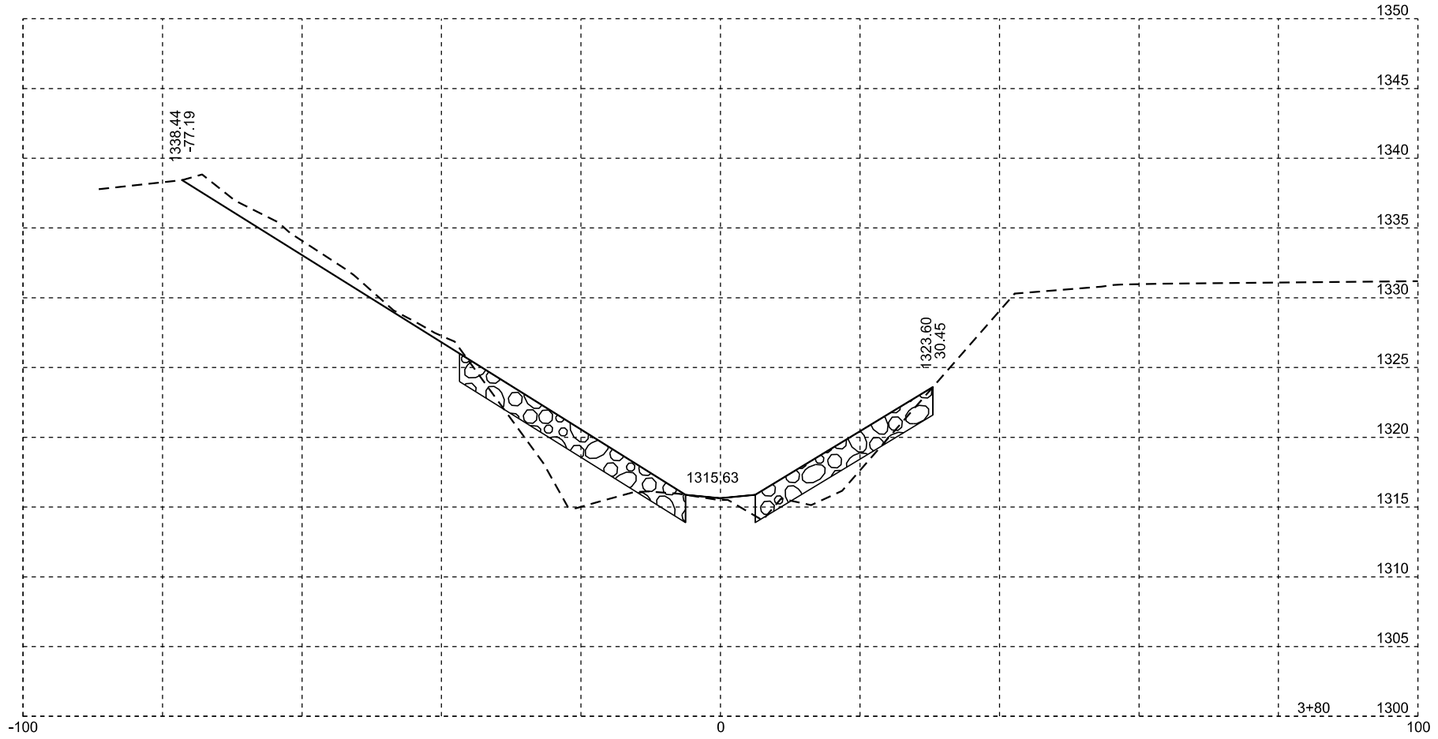
PLOT NAME - 5

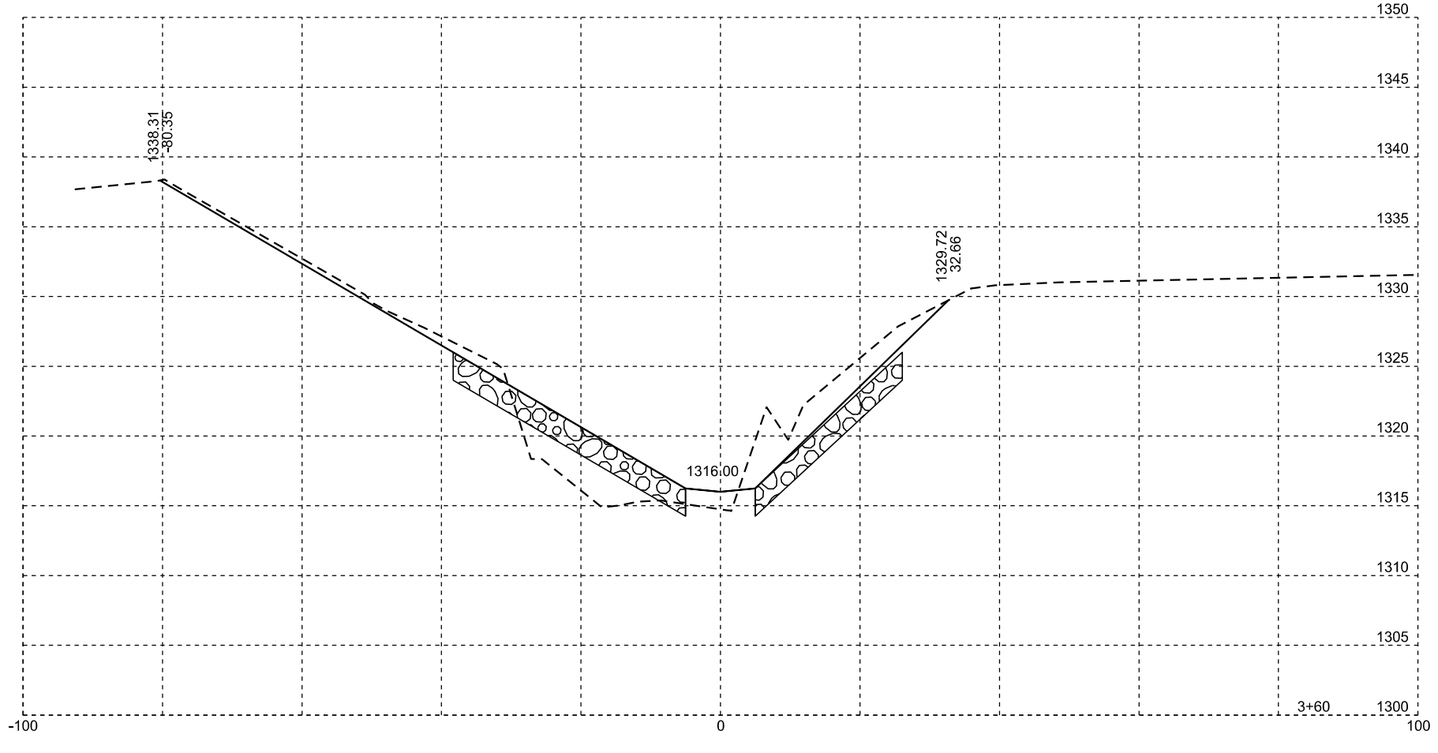
FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN

PLOTTED FROM - TRSF12114

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	14	25

Plotting Date: 04/03/2017





PLOT SCALE - 1:21.7176

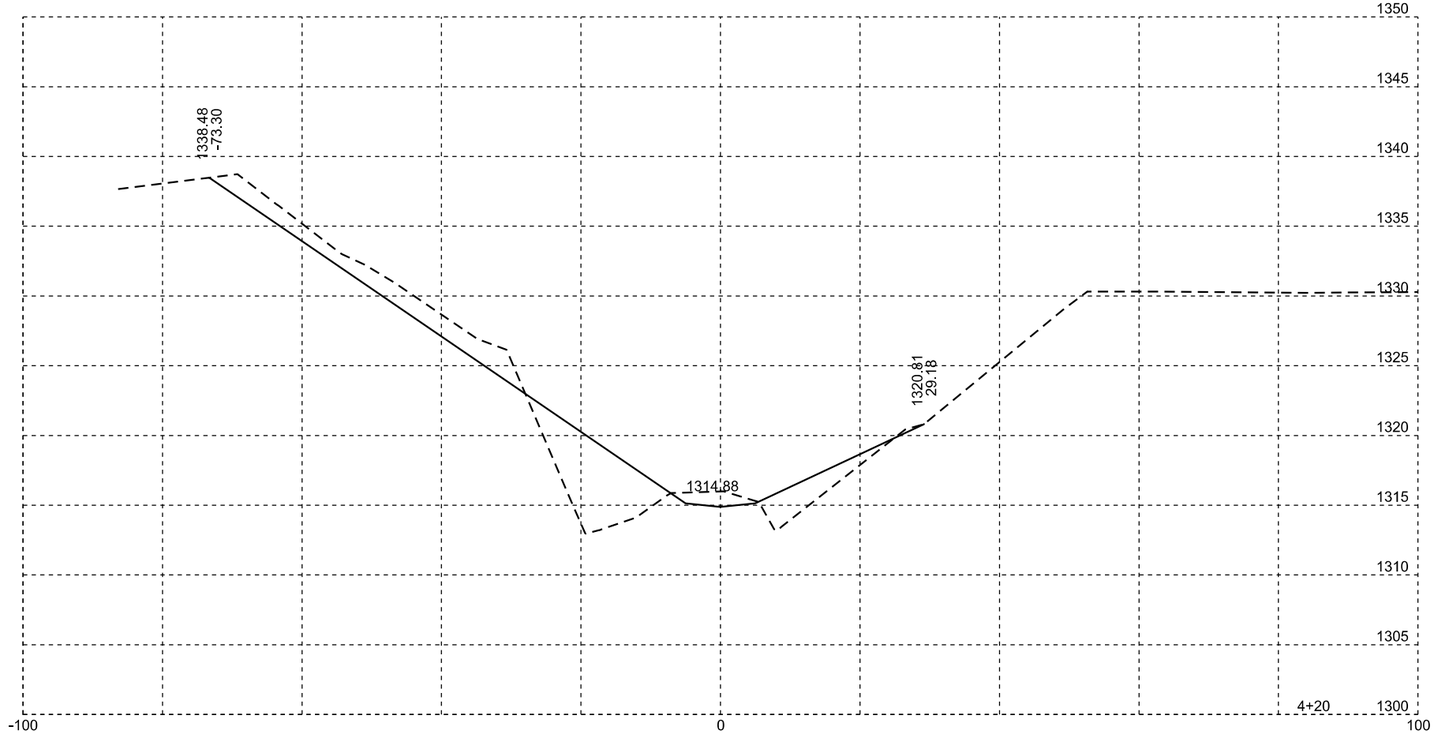
PLOTTED FROM - TRSF12114

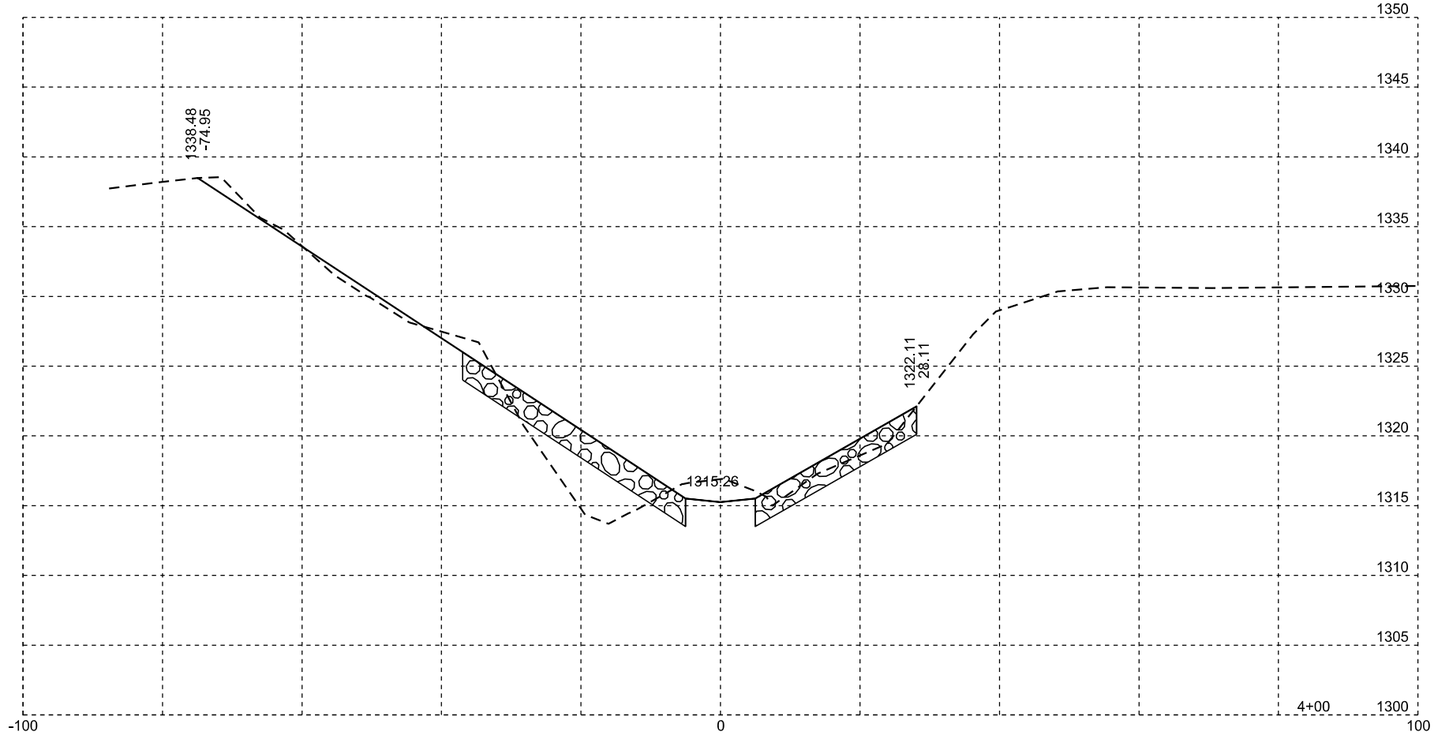
PLOT NAME - 6

FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	15	25

Plotting Date: 04/03/2017





PLOT SCALE - 1:21.7176

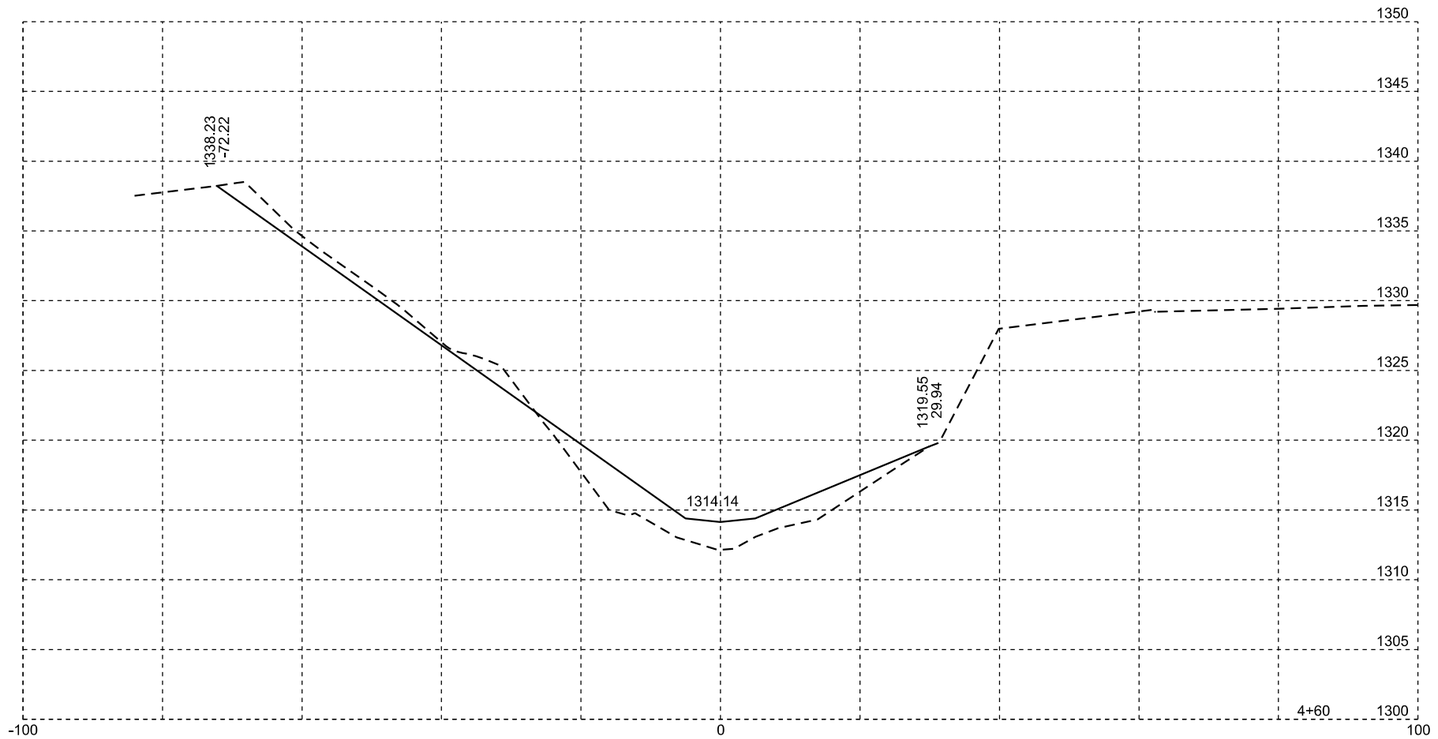
PLOTTED FROM - TRSF12114

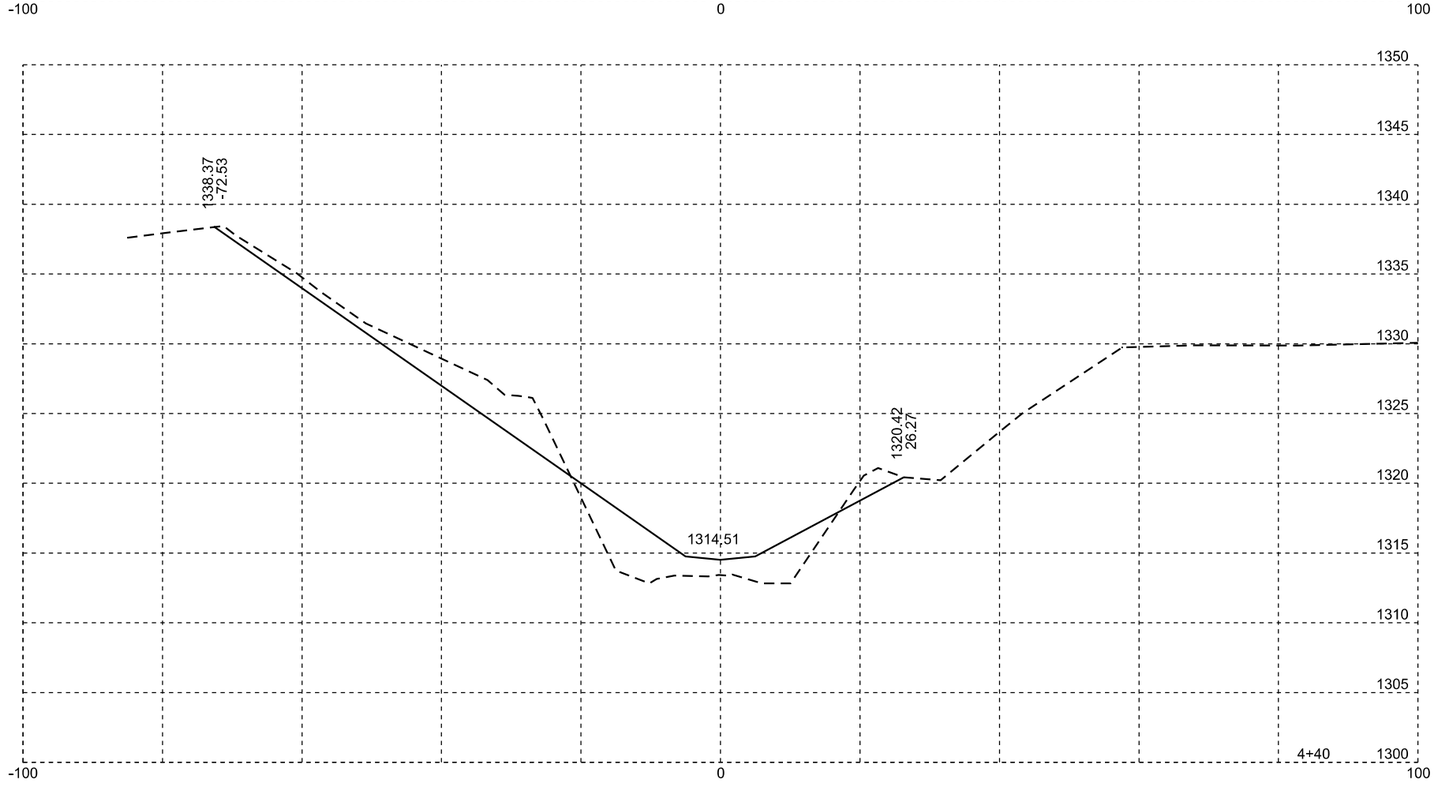
PLOT NAME - 7

FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	16	25

Plotting Date: 04/03/2017





PLOT SCALE - 1:21.7176

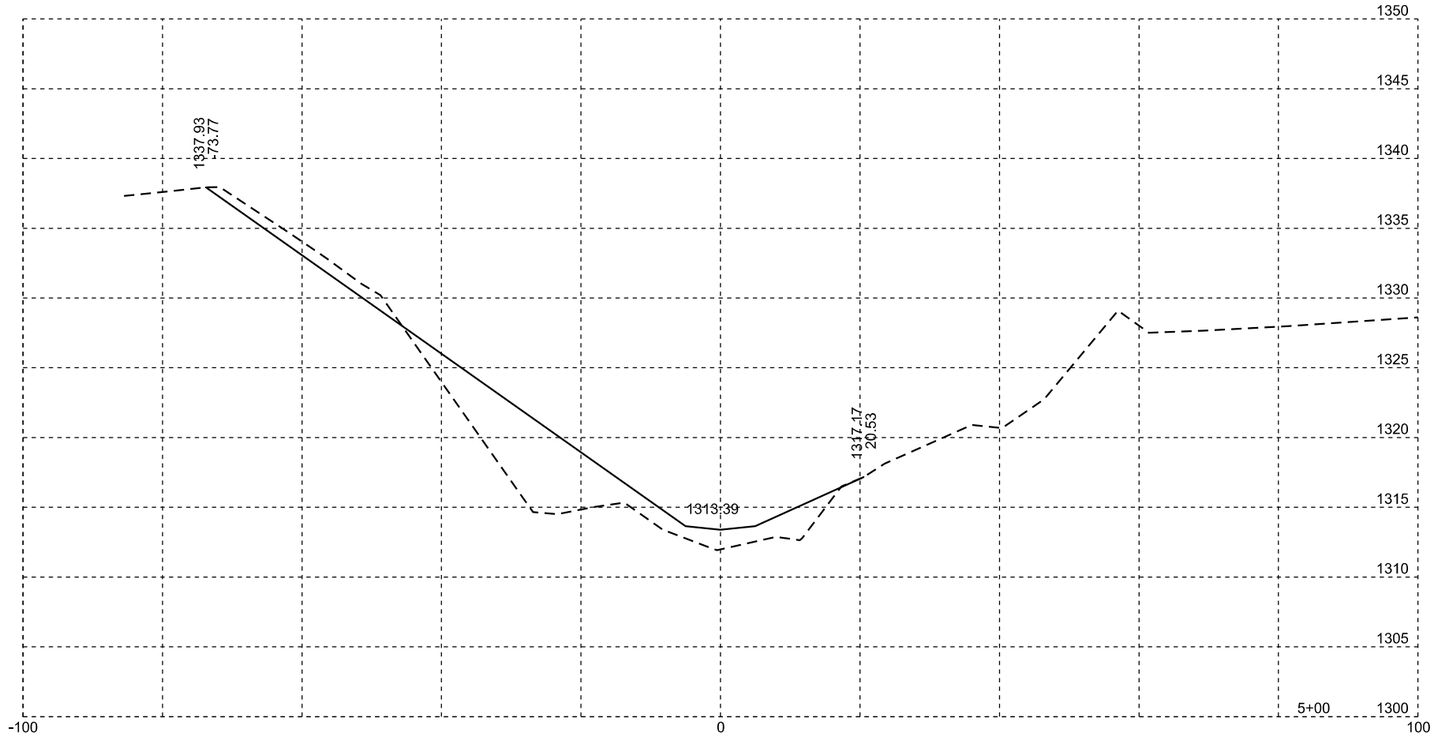
PLOTTED FROM - TRSF12114

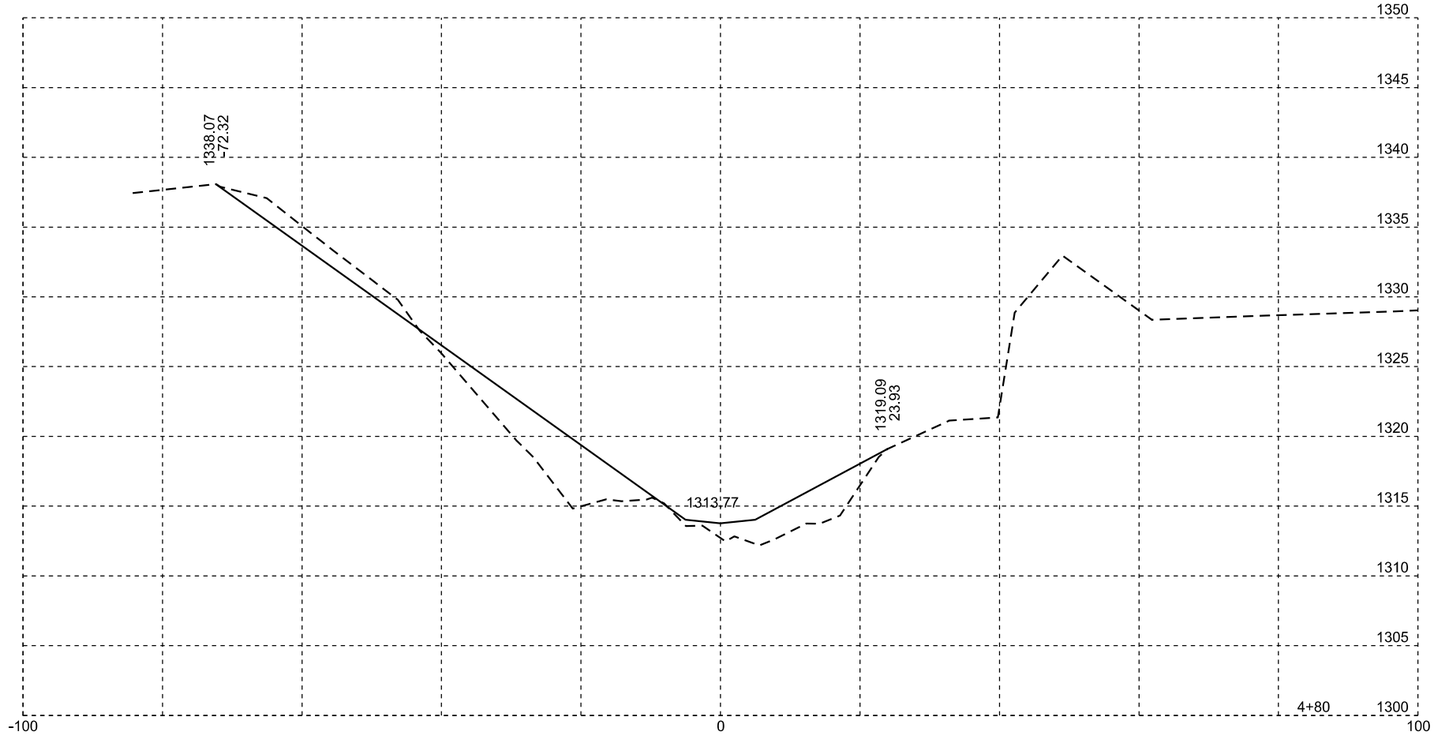
PLOT NAME - 8

FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	17	25

Plotting Date: 04/03/2017





PLOT SCALE - 1:21.7176

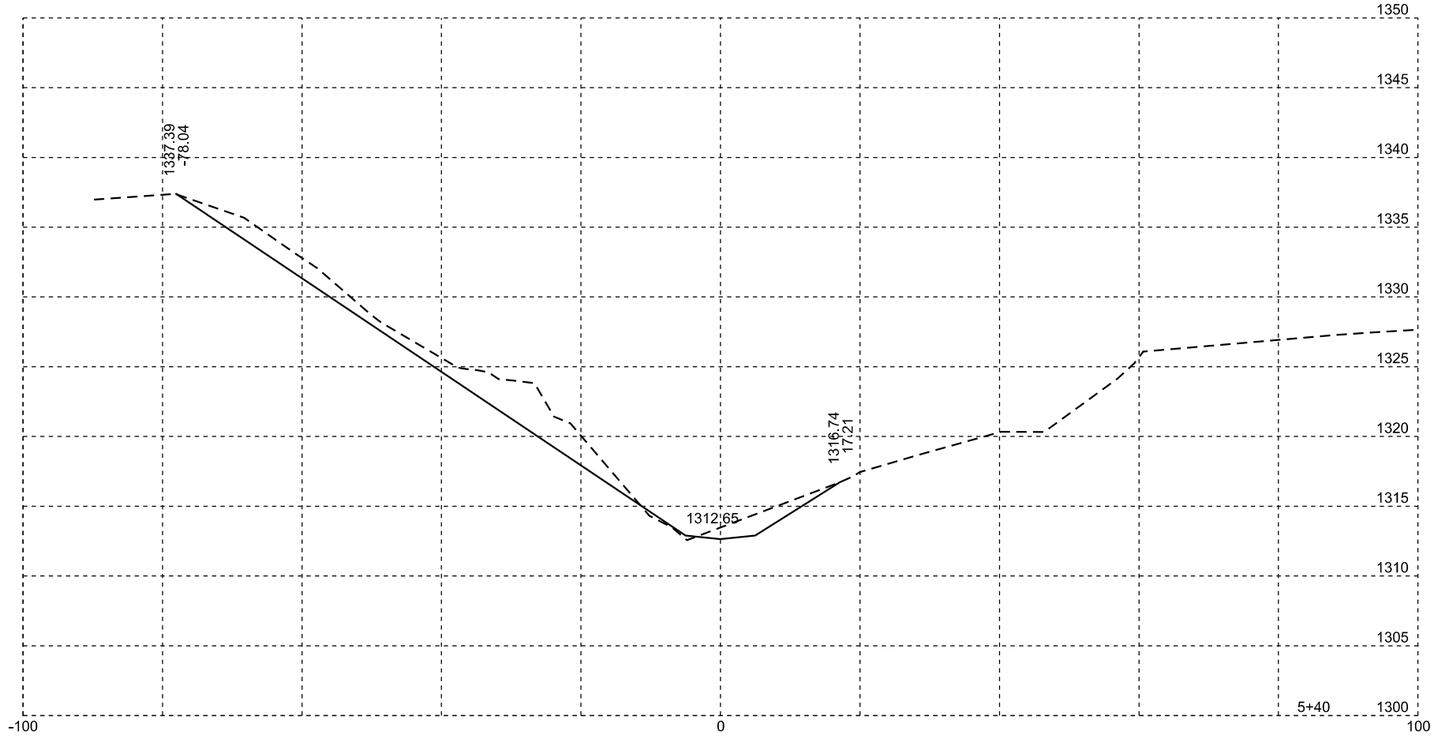
PLOTTED FROM - TRSF12114

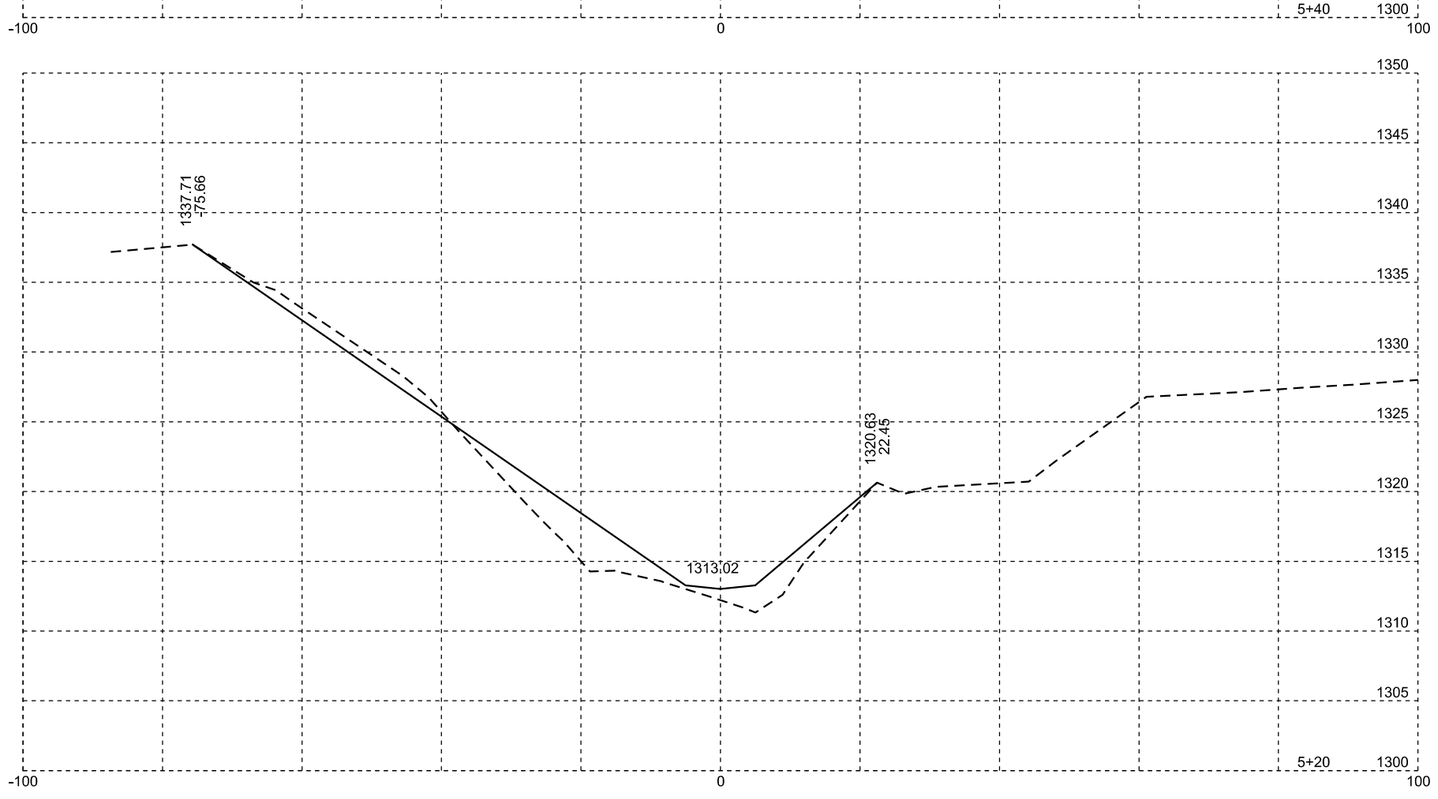
PLOT NAME - 9

FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	18	25

Plotting Date: 04/03/2017





PLOT SCALE - 1:21.7176

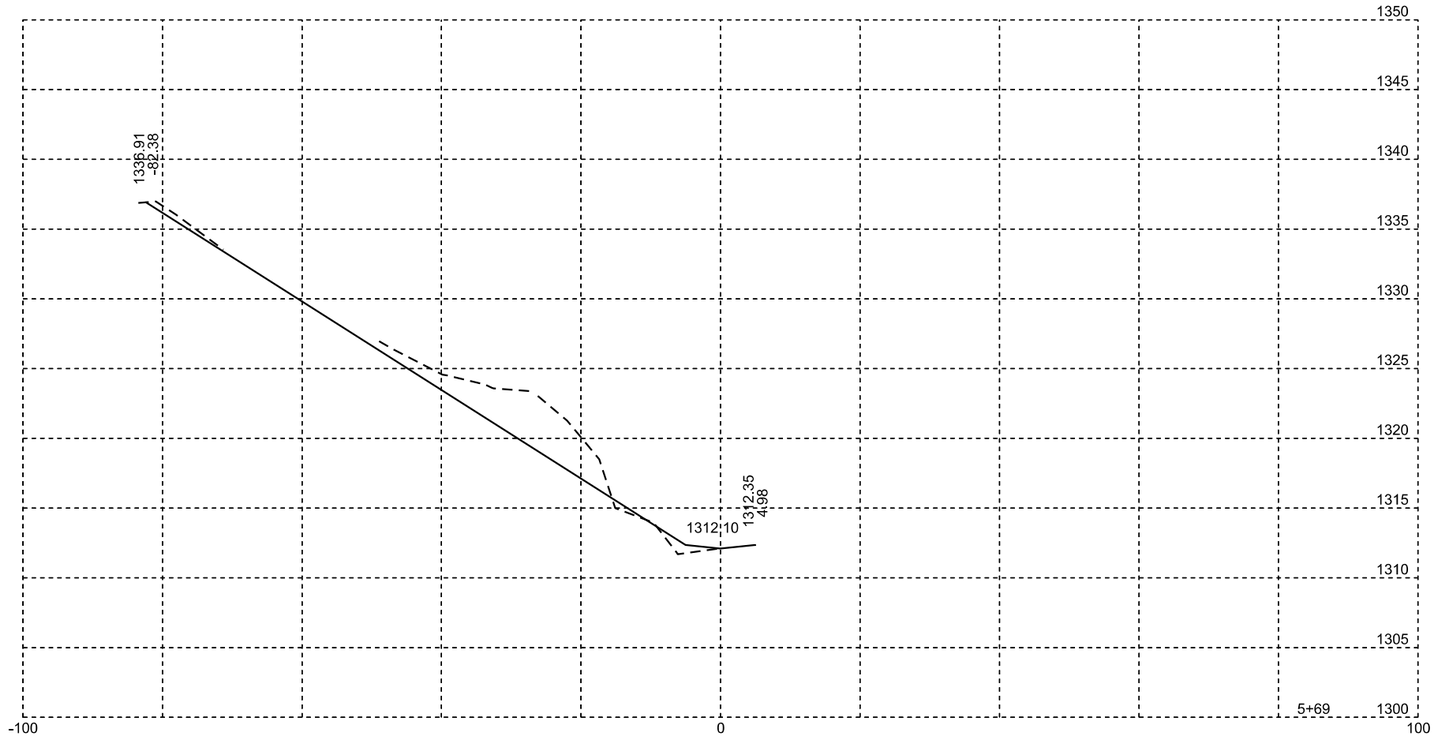
PLOTTED FROM - TRSF12114

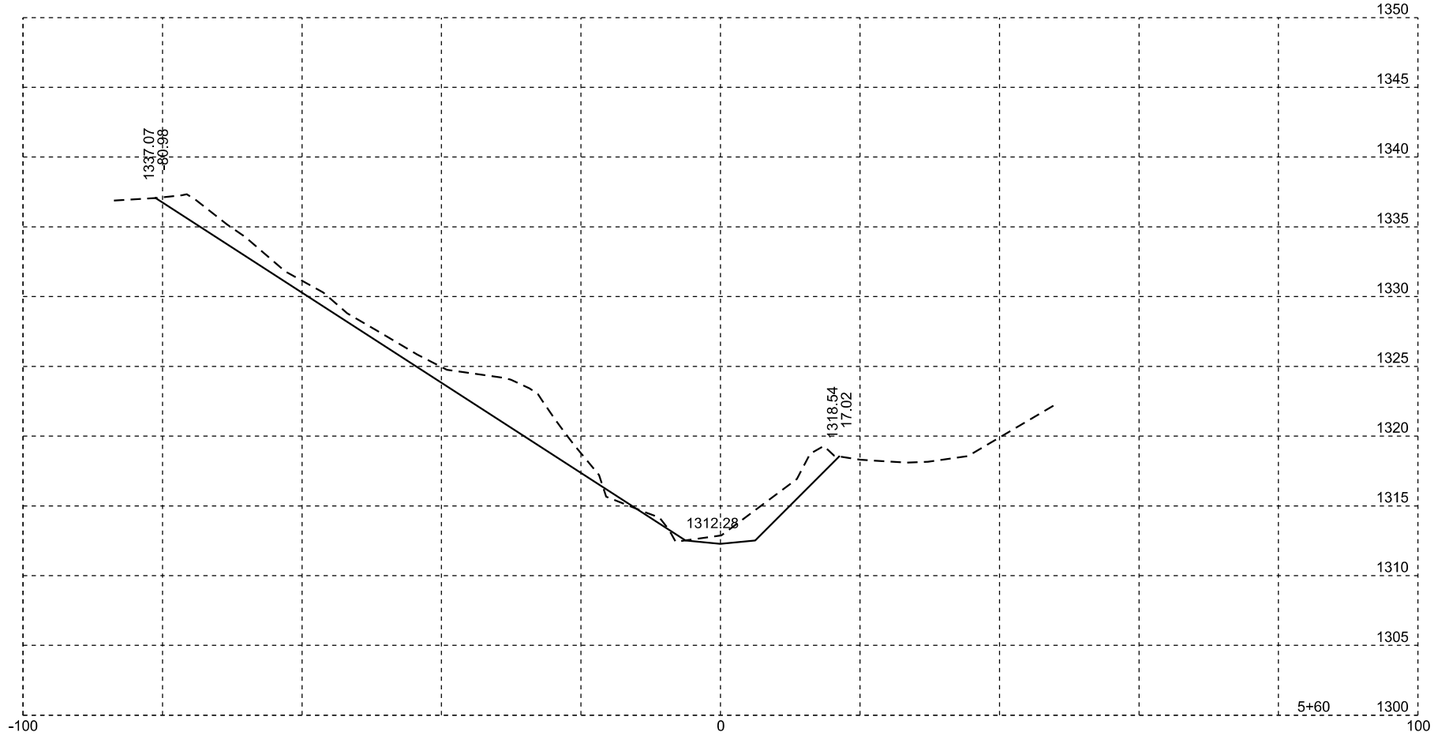
PLOT NAME - 10

FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	229N-271	19	25

Plotting Date: 04/03/2017



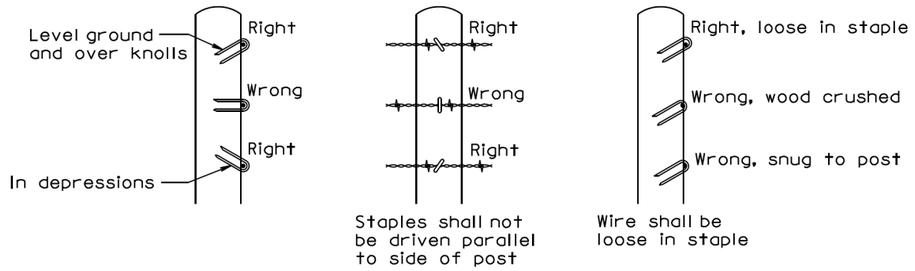


PLOT SCALE - 1:21.7176

PLOTTED FROM - TRSF12114

PLOT NAME - 11

FILE - ...\TRHUINT05\DESKTOP\X14M9.DGN



STAPLE INSTALLATION

GENERAL NOTES:

The Right-of-Way fence shall consist of barbed wire or a combination of woven wire and barbed wire. The barbed wire and/or woven wire shall be fastened to all wood posts or fastened to alternating wood and steel posts. Only wood posts shall be used for brace panels. Gates shall be of the type designated in the plans or as otherwise directed by the Engineer. Fence shall be constructed conforming to the details on the standard plates and in the plans unless otherwise directed by the Engineer.

Right-of-Way fence on Interstate Projects shall be constructed one foot within the Interstate Right-of-Way lines except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

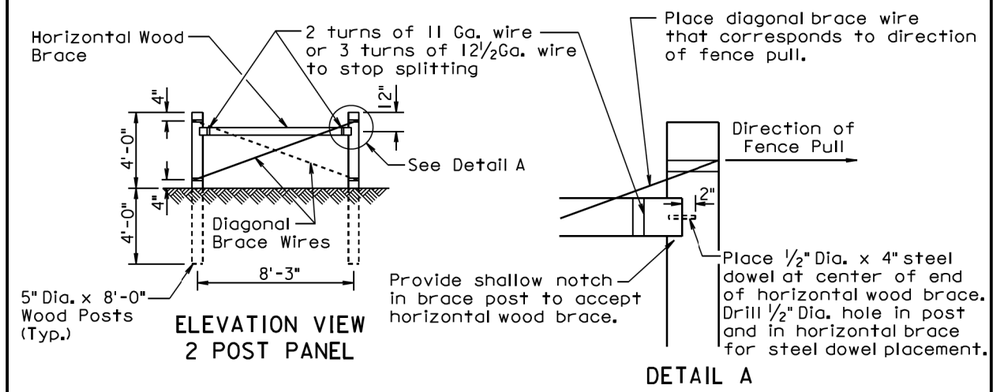
Right-of-Way fence other than on Interstate Projects shall be constructed within one foot of the Right-of-Way on the Landowner's side except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

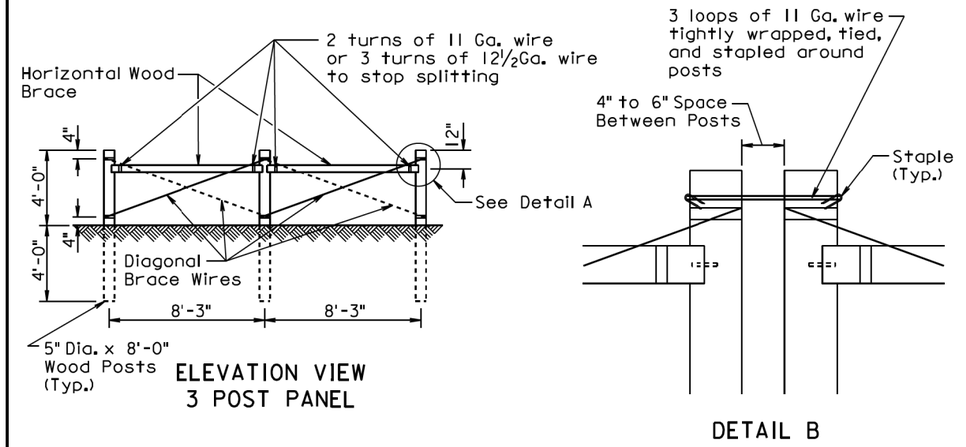
Barbs shall be fabricated from zinc coated 14 ga. wire. Two point barbs shall be wrapped twice around one main strand at 4" spacings and the four point barbs shall be interlocked and wrapped around both main strands at 5" spacings.

The gages of wire and wood post lengths and sizes are the minimum acceptable unless otherwise specified in the plans. The tolerances for steel posts shall be as stated in AASHTO M281. Woven wire shall conform to design and specifications of ASTM A116 and barbed wire shall conform to ASTM A121.

December 23, 2004

Published Date: 2nd Qtr. 2017	SDDOT	STAPLE INSTALLATION AND GENERAL RIGHT-OF-WAY FENCE NOTES	PLATE NUMBER 620.02
			Sheet 1 of 1





GENERAL NOTES:

Two Post Panels shall be installed at least every 1320' between corners.

Two Post Panels shall be installed at any sharp vertical angle crest points and as directed by the Engineer.

Horizontal wood braces shall consist of 4" dia. x 8' wood posts or rough 4" x 4" x 8' timbers.

Diagonal brace wires shall be fabricated with 4 strands of 9 Ga. galvanized wire twisted tight. The diagonal brace wires shall be installed in accordance with the direction of the fence pull. Two diagonal brace wires are required if fence pull is in both directions.

December 23, 2004

Published Date: 2nd Qtr. 2017	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 1 of 3

SPACING OF 2 POST PANELS WITHIN CURVES	
DEGREE OF CURVE	SPACING OF 2 POST PANEL
less than 3°15'	** 1320'
3°15' and greater	**At P.C., P.T., and at every 1320' between P.C. and P.T.

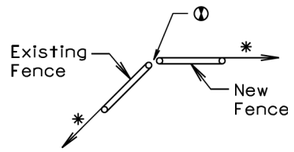
GENERAL NOTE:

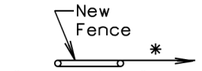
All degrees of curvature stated for fence are at centerline of roadway.

* If fence length is less than 600' to next corner use a 2 post panel.
If fence length is greater than 600' to next corner use a 3 post panel.

** Fence lengths greater than 1320' and less than 2640' place 2 Post Panel approximately at midpoint.

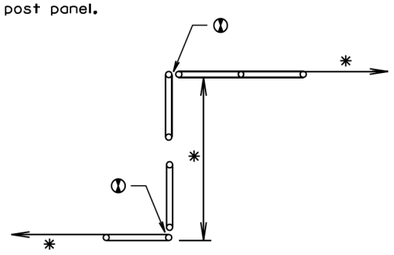
① See Detail B on Sheet 1 of 3.



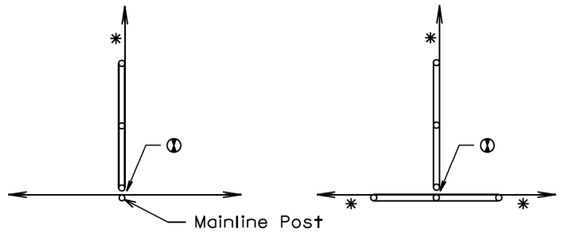


Open ended fence no existing fence

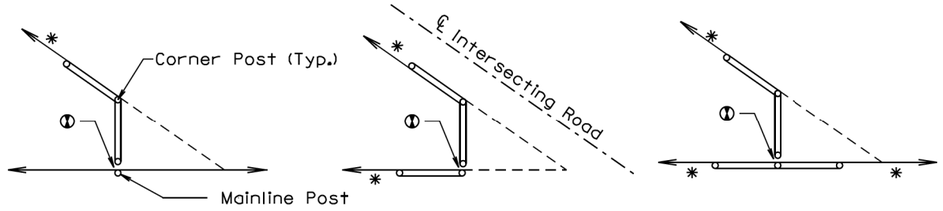
BEGIN OR END FENCE
(where new fence ties into existing fence)



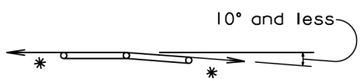
SHORT JOGS IN FENCE



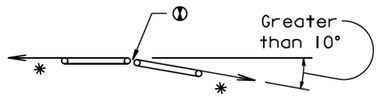
CROSS FENCE



SHARP ANGLES IN CROSS FENCE



Additional fence panel is NOT required when an angle in the mainline fence is 10° and less.



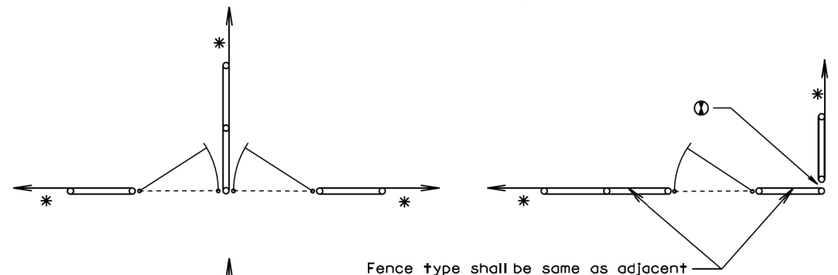
Additional fence panel is required when an angle in the mainline fence is greater than 10°.

ANGLES IN MAINLINE FENCE

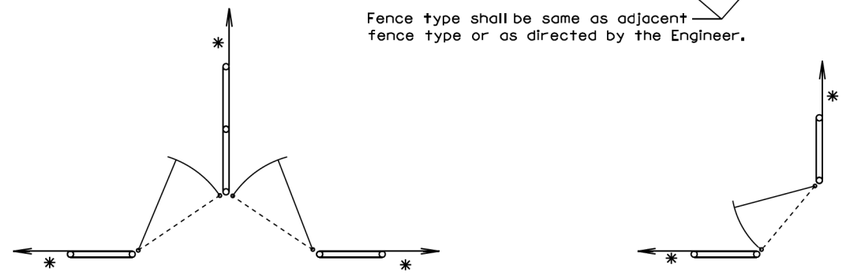
December 23, 2004

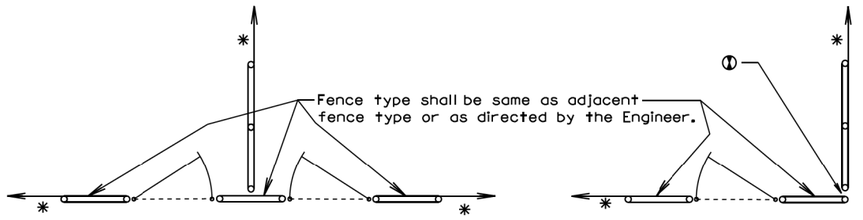
Published Date: 2nd Qtr. 2017	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 2 of 3

ENTRANCE
(NOT ON CORNER)



Fence type shall be same as adjacent fence type or as directed by the Engineer.





DOUBLE ENTRANCES

ENTRANCES AT CORNERS

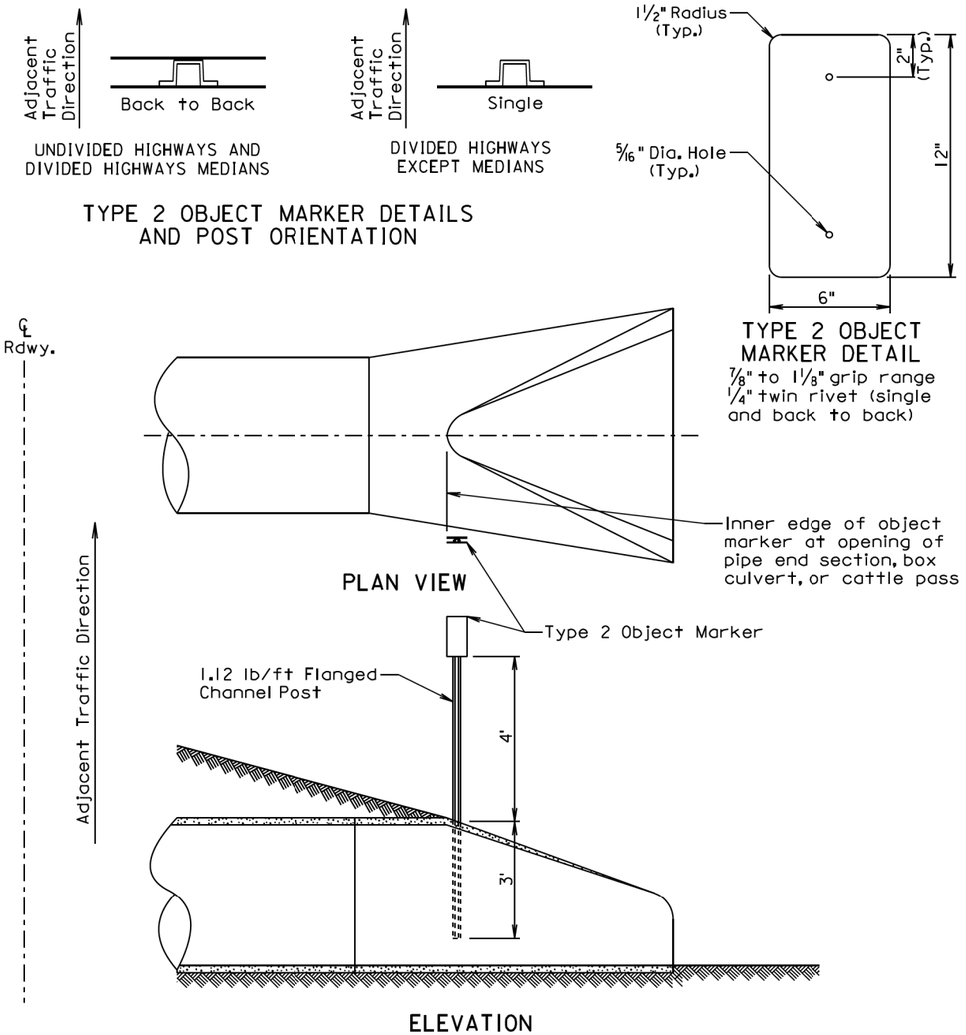
GATES

* If fence length is less than 600' to next corner use a 2 post panel.
If fence length is greater than 600' to next corner use a 3 post panel.

① See Detail B on Sheet 1 of 3.

December 23, 2004

Published Date: 2nd Qtr. 2017	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 3 of 3



GENERAL NOTES:

The type 2 object markers and the 1.12 lb/ft flanged channel posts shall be in conformance with Specifications Section 982.2 J.

Payment for the type 2 object markers shall be in conformance with Specification Section 632.5 B.

June 26, 2015

Published Date: 2nd Qtr. 2017	SDDOT	TYPE 2 OBJECT MARKER INSTALLATION AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES	PLATE NUMBER 632.10
			Sheet 1 of 1

The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

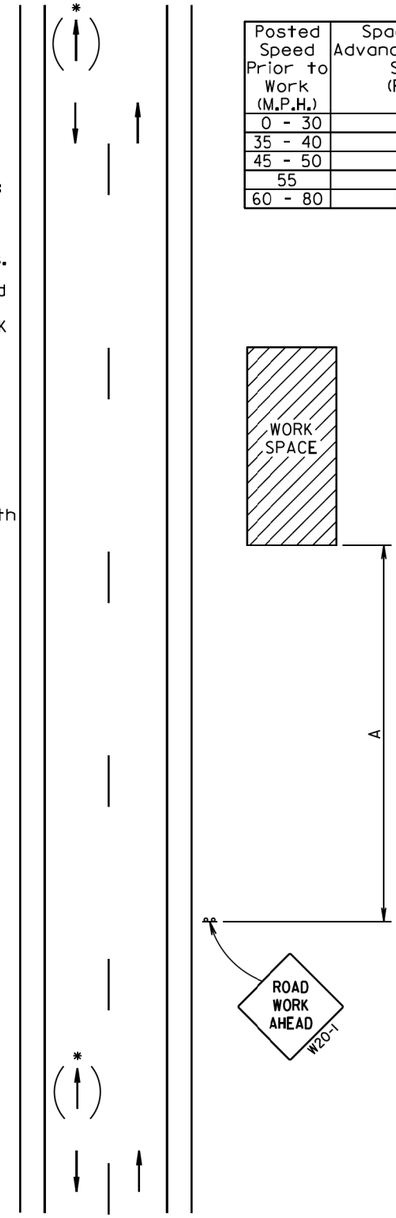
The signs illustrated shall be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

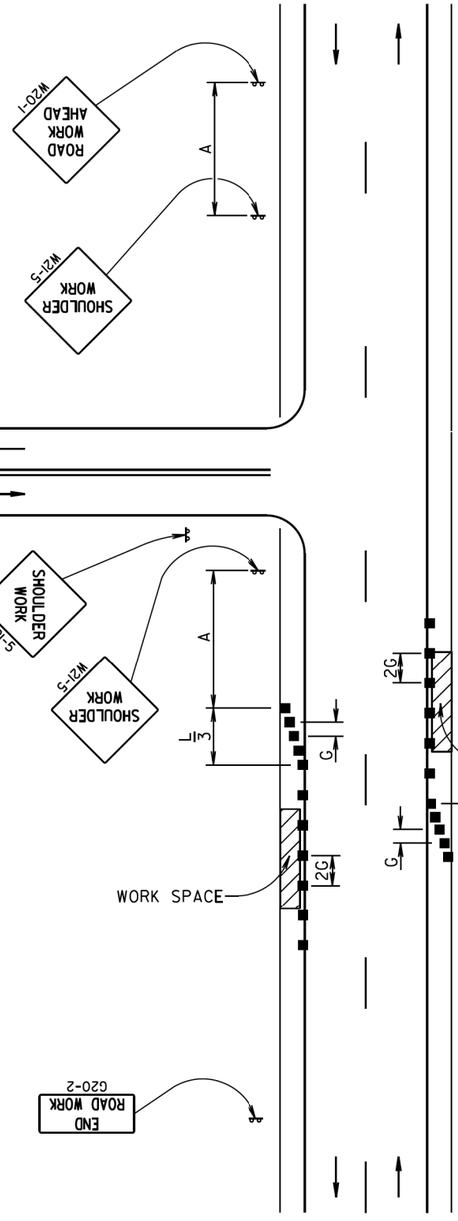
For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000



April 15, 2015

Published Date: 2nd Qtr. 2017	SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
			Sheet 1 Of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50
55	750	660	50
60 - 65	1000	780	50

■ Channelizing Device

The channelizing devices shall be drums or 42" cones if traffic control must remain overnight.

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

June 3, 2016

Published Date: 2nd Qtr. 2017	SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES WORK ON SHOULDERS	PLATE NUMBER 634.03 Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A) (B)	L (Feet)
45 - 50	500	600
55	750	660
60 - 65	1000	780
	(A) (B)	
70 - 80	1000 1500	1125

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	25
35 - 45	25
50	50 *
55	50 *
60 - 80	50 *

* Spacing is 40' for 42" cones.

■ Channelizing Device

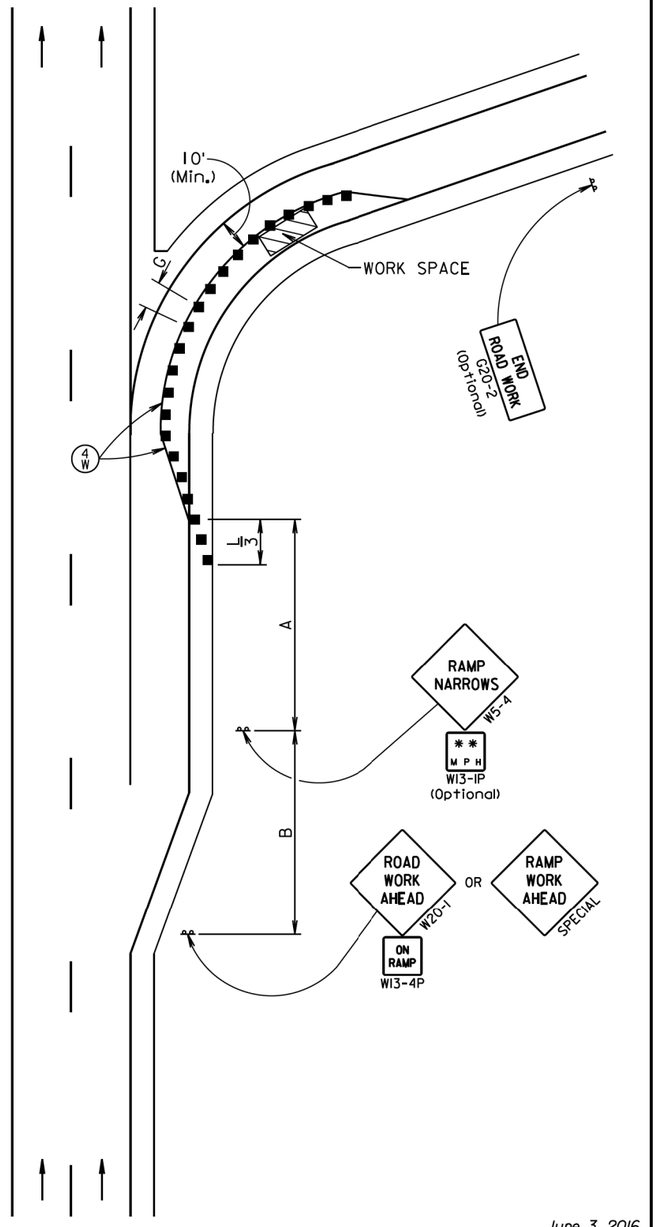
(4W) 4" White Temporary Pavement Marking

** Need and safe speed to be determined by the Highway Authority.

Temporary pavement markings shall be used if traffic control must remain overnight.

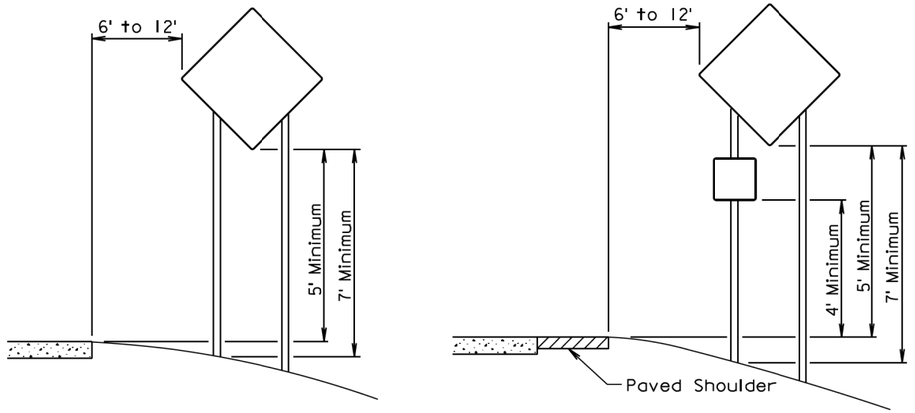
The channelizing devices shall be drums or 42" cones if traffic control must remain overnight.

Truck off-tracking should be considered when determining whether the 10-foot minimum lane width is adequate.



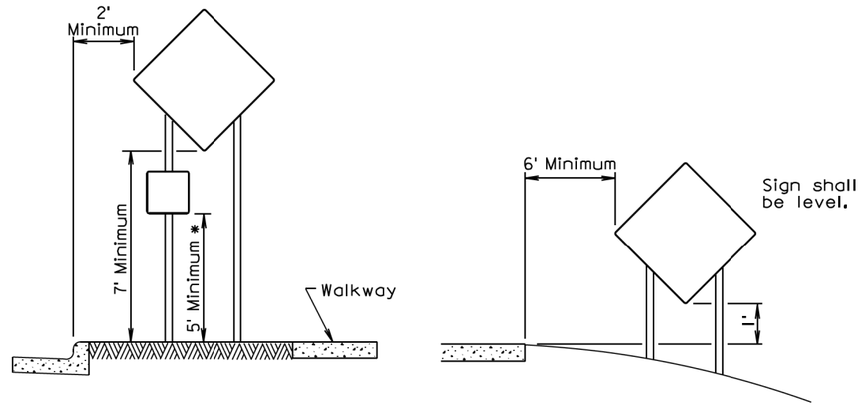
June 3, 2016

Published Date: 2nd Qtr. 2017	SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES PARTIAL EXIT RAMP CLOSURE	PLATE NUMBER 634.69 Sheet 1 of 1



RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



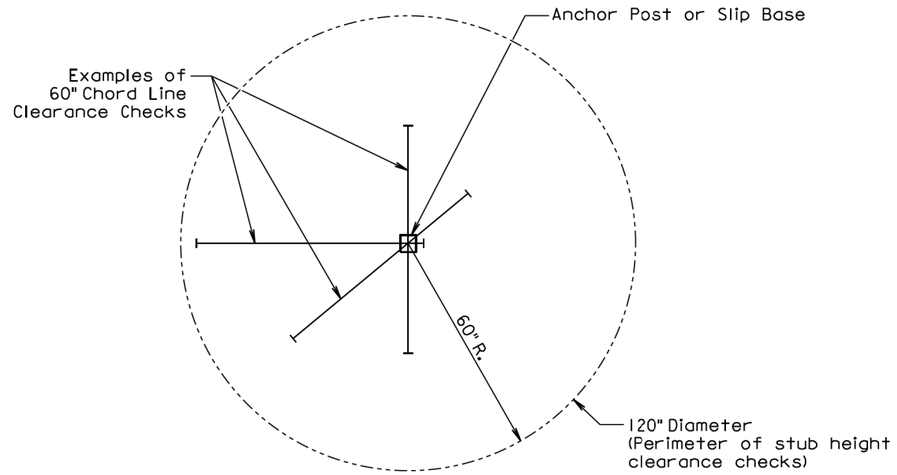
URBAN DISTRICT

* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

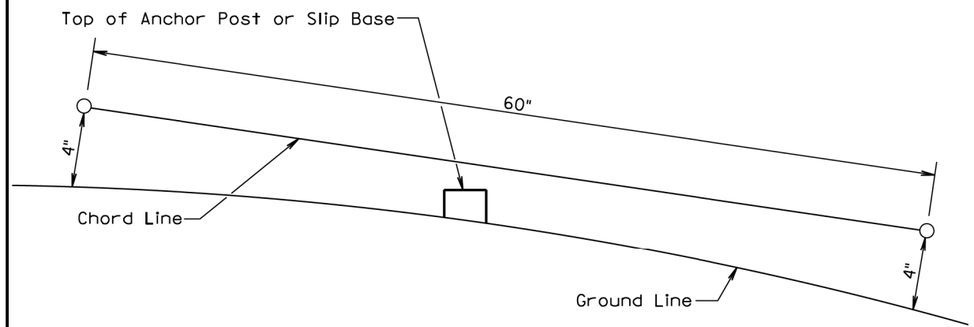
RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

September 22, 2014

Published Date: 2nd Qtr. 2017	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

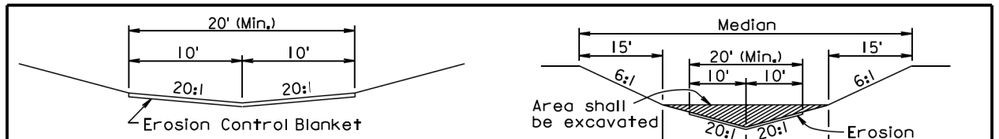
The top of anchor posts and slip bases SHALL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height shall be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

July 1, 2005

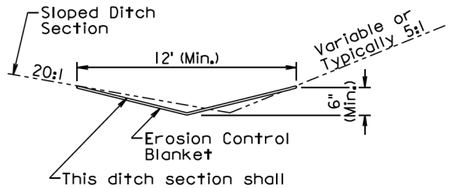
Published Date: 2nd Qtr. 2017	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1



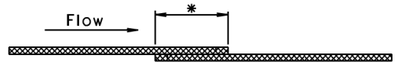
STANDARD DITCH SECTION

The median shall be shaped to the limits shown in this detail where the erosion control blanket will be placed.

MEDIAN SECTION



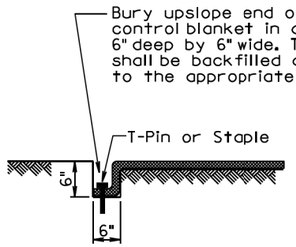
SLOPED DITCH SECTION



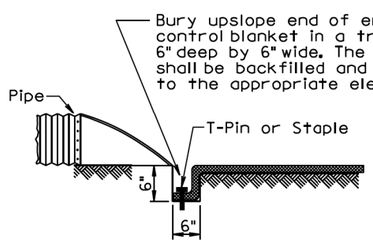
* Use a 4" (Min.) overlap wherever two widths of erosion control blanket are applied side by side.

* Use a 6" (Min.) overlap wherever one roll of erosion control blanket ends and another begins.

OVERLAP DETAIL



TRENCH DETAIL



PIPE END DETAIL

GENERAL NOTES:

Prior to placement of the erosion control blanket, the areas shall be properly prepared, shaped, seeded, and fertilized.

Erosion control blanket shall be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket shall be buried in a trench 6" wide by 6" deep. There shall be at least a 6" overlap wherever one roll of erosion control blanket ends and another begins, with the upslope erosion control blanket placed on top of the downslope erosion control blanket.

The erosion control blanket shall be pinned to the ground according to the manufacturer's installation recommendations.

After the placement of the erosion control blanket, the Contractor shall fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

All ditch sections shall be shaped when installing the erosion control blanket. All costs for shaping the ditches shall be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

December 23, 2004

Published Date: 2nd Qtr. 2017	SDDOT	***EROSION CONTROL BLANKET***	*PLATE NUMBER* 734.01
			Sheet 1 of 1